State of New Hampshire

State Emergency Operations Plan

RADIOLOGICAL EMERGENCY RESPONSE FOR NUCLEAR FACILITIES

INCIDENT ANNEX – 2016

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Chapter 1 – INTRODUCTION

I. Purpose and Scope

The Radiological Emergency Response for Nuclear Facilities (RER) Incident Annex to the State of New Hampshire Emergency Operations Plan (SEOP) is based upon guidance criteria developed by the U.S. Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (NUREG-0654/FEMA-REP-1, Rev.1 and subsequent supplements) concerning incidents at nuclear power plants. This Annex supports the State of New Hampshire's (NH) SEOP and is operations oriented. It addresses the ability of State and local government to provide a rapid and coordinated response to radiological emergencies in or near New Hampshire. It defines responsibilities of State and local agencies within the Emergency Support Function (ESF) framework.

This Annex of the SEOP is applicable to all elements of state government and support agencies that would have functional responsibilities unique to a radiological incident occurring at a nuclear power plant. The responsibilities assigned to organizations in this Annex are in addition to other functions that any particular agency may perform in the discharge of their routine, all-hazards responsibilities. The information and concept of operations contained in this document relating to Hostile Action Based (HAB) events must be generalized and is intended only to document the major policies and procedures for responding to security events at the nuclear power plants.

The Director of HSEM will annually certify the Annex to be current. The Technological Hazards Section of HSEM will be the lead for the annual review/updating of procedures, attachments and general maintenance of this Annex.

II. Assumptions

Radiological emergencies at a nuclear power plant can be postulated as ranging from a minor emergency with no offsite effects to a major emergency that may result in an offsite release of radioactive materials.

The overall objective of radiological emergency response planning and preparedness is to minimize radiation exposure from a spectrum of emergencies that could produce offsite radiation doses in excess of protective action guides established by the Environmental Protection Agency (EPA). Minimizing radiation exposure will reduce the consequences of an emergency to persons in the area.

No specific emergency sequence can be isolated as the model for which to plan because each emergency could have different consequences, both in nature and degree. As an alternative to defining a specific emergency, this Annex identifies various parameters for planning that are based upon knowledge of the possible consequences, timing and release characteristics of a spectrum of emergencies. This Annex will establish the appropriate response for each emergency class.

Most security related procedures and policies for such a response is considered "law enforcement sensitive" information or classified as "safeguards information" by the plant. That detailed information is contained in classified planning documents. Those with a "need to know" have access to those plans and procedures.

Commercial nuclear power plant licensees will notify the State of New Hampshire of an emergency in accordance with regulatory requirements. Each principal involved in the response is able to retain a response posture on a continuous basis for a protracted period of time.

This Annex will provide guidance to local governments in their planning for and carrying out emergency logistical operations necessary for the implementation of protective actions and procedures for the off-site management of radiological incidents.

III. Known Radiological Facilities

A significant natural or technological event may cause the release of radioactive material from a nuclear facility, creating a possible threat to health and safety, and requiring prompt protective actions. Depending on the type and amount of material released, radiological emergencies could have immediate or long-term health effects, causing property damage and contaminate water and food products above established health standards. This Incident Annex will focus primarily on events occurring at the sites described below.

A. Seabrook Station Nuclear Power Plant

The Seabrook Station (SS) Nuclear Power Plant is located on an 889-acre site in the southeast corner of New Hampshire in the Town of Seabrook on Rte. 1, two miles north of the Massachusetts border, 13 miles south of Portsmouth, N.H. and about 40 miles north of Boston. It is operated by NextEra Energy Seabrook LLC, which owns 88.2% of the facility. Three Massachusetts municipal utilities jointly own the other 11.8%. It is the largest reactor in New England and provides about 7% of the region's electricity. The reactor is a Westinghouse Pressurized Water Reactor (PWR) with the reactor core comprised of 193 fuel assemblies.

Seabrook Station's Full-Power Operating license was granted in March, 1990 with commercial operation started in August, 1990. The secondary system cooling tunnels consist of two, three-mile-long tunnels bringing water to and from the Atlantic Ocean. Seabrook Station generates about 1,290 megawatts (MWe) of electricity -- enough power to supply the daily needs of more than 900,000 homes. Located in the NRC Region 1, its license is due to expire on Oct.17, 2026. The Plume Exposure Pathway EPZ for Seabrook Station includes all, or part of, 17 New Hampshire municipalities. Most of its Plume Exposure Pathway EPZ, and much of its Ingestion Exposure Pathway/Post Plume EPZ, fall within the State's boundaries.

B. Vermont Yankee

Vermont Yankee (VY) was a boiling water reactor (BWR) nuclear power plant owned by Entergy Nuclear. It is located on an 125-acre site in the municipality of Vernon, Vermont located just across the Connecticut River from Hinsdale, N.H. and generated about 620 megawatts (MWe) of electricity, about 1/3 of the electricity consumed in Vermont and nearly 2/3 of the in-state generating capacity. VY started commercial operation on February 28, 1973. Spent fuel is currently stored in an on-site fuel pool - a heavily reinforced concrete structure filled with water that acts as a natural barrier to radiation and cools the spent fuel. Located in the NRC Region 1. Vermont Yankee ceased operations in December of 2014 and has filed decommissioning intentions with the Nuclear Regulatory Commission.

C. Other Known Facility In/Bordering New Hampshire:

1. Portsmouth Naval Shipyard

The Portsmouth Naval Shipyard (PNS) is a US Department of Navy facility that repairs, overhauls, and maintains Navy ships, including nuclear-powered ships. Drydocks, cranes, waste-handling facilities, and offices are located at the shipyard. Activities supporting nuclear propulsion systems are performed in accordance with the requirements and authority of the Naval Nuclear Propulsion Program, a joint DOE and U.S. Department of Navy program responsible for all activities relating to naval nuclear propulsion.

The Portsmouth Naval Shipyard is located about 50 miles north of Boston, Massachusetts, at the southernmost tip of Maine. The shipyard itself is on an island in Kittery, Maine, across from Portsmouth, New Hampshire, near the mouth of the Piscataqua River. The shipyard encompasses about 297.45 acres including the main base and a non-contiguous family housing site. The total number of buildings is 348, with over 4 million square feet of space. This total includes 49 ship repair/overhaul buildings with 1,524,512 square feet. The shipyard has three dry docks ranging up to SSBN and SSN 688 Class capability and 6,224 lineal feet of berthing. The berthing is comprised of six submarine berths (of varying class capability) ranging from only parking capability with no services to repair berths for yard and service. The Portsmouth Harbor, about three nautical miles from the deep water of the Atlantic Ocean, is accessible year round via the Piscataqua River channel. The river channel is a minimum of 35 feet deep at mean low water and 400 feet wide. A Coast Guard station is located at New Castle near the harbor entrance.

Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), Executive Order 12580, and the National Contingency Plan (NCP), the Department of Defense (DOD) is responsible for hazardous substance responses to releases on or from DOD facilities or vessels under the jurisdiction, custody, or control of DOD, including transportation-related incidents. For responses under these circumstances, DOD provides a Federal Office of Special Counsel (OSC) responsible for taking all CERCLA response actions, which includes on-site and off-site response actions (40 CFR 300.120(c) and 40 CFR 300.175(b)(4)).

For incidents where the incident is on, or where the sole source of the nuclear/radiological release is from, any facility or vessel under DOD jurisdiction, custody, or control, DOD is responsible for:

- Mitigating the consequences of an incident.
- Providing notification and appropriate protective action recommendations to State, tribal and/or local government officials.
- Minimizing the radiological hazard to the public.

For radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in DOD custody, DOD may establish a National Defense Area (NDA). DOD will coordinate with State and local officials to ensure appropriate public health and safety actions are taken outside the NDA. DOD will lead the overall response to safeguard national security information and/or restricted data, or equipment and material. DOD may also include lands normally not under DOD control as part of the established NDA for the duration of the incident. *(National Response Framework, June 2013; Nuclear/Radiological Incident Annex (June, 2008).* For the purposes of this Annex, radiological emergency response for Portsmouth Naval Shipyard (PNS) is not included, and is covered under an individual site plan.

IV. Emergency Planning Zones

Emergency Planning Zones (EPZ) are defined as the areas for which detailed planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of a radiological emergency. In a particular emergency, protective actions might be restricted to a small part of the EPZ. Although the radius of the emergency planning zones implies a circular area of approximately a 10-mile radius around the nuclear power plant, the actual shape will depend on local conditions such as topography, land use characteristics, access routes, and jurisdictional boundaries and other considerations.

Two nuclear power plant EPZs encompass parts of the State of New Hampshire. The Vermont Yankee (VY) Nuclear Power Plant is located in Vernon, Vermont across the Connecticut River from Hinsdale, New Hampshire and the Seabrook Station (SS) Nuclear Power Plant is located in southeast New Hampshire in the Town of Seabrook. **(Figure 1-1)**

A. Plume Exposure Pathway Planning Zone

The plume exposure pathway extends outward to a radius of approximately ten (10) miles from the incident/plant site. Primary potential exposure sources are direct external exposure to beta and gamma radiation from the plume and deposited material, and internal exposure resulting from inhalation of radioactive material in the plume. Appropriate response actions will be determined by the ability to best reduce potential exposure under the specific conditions occurring during a radiological emergency. The Plume Exposure Pathway planning includes elements that can be used to provide mitigating steps to protect the public.

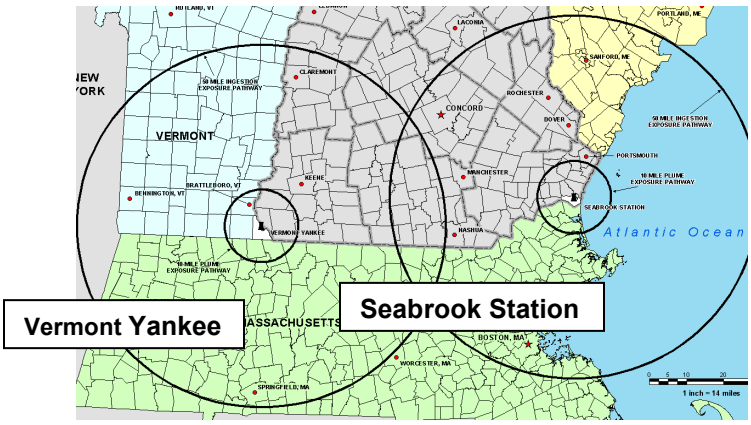
The Plume Exposure Pathway EPZ for VY includes five New Hampshire towns. The Plume Exposure Pathway EPZ for SS includes seventeen municipalities in New Hampshire.

B. Ingestion Pathway Emergency Planning Zone

The ingestion pathway zone extends for a radius of approximately fifty (50) miles from the incident/plant site. Primary potential exposure source from this pathway would be from deposited radioactive materials, re-suspension of deposited radioactive material, and the ingestion of contaminated water or foods such as milk, fresh produce or aquatic food stuffs. For this pathway, the planning effort involves the identification of potentially radiologically contaminated food and water. Following identification, control measures will be used to minimize danger to the public. In this zone, detailed planning is done to mitigate the effects of the release of radioactivity on the food chain.

The VY Ingestion Exposure Pathway EPZ covers a portion of southwest New Hampshire and much of SS's fall within the New Hampshire southeast boundaries. **(Figure 1-2)**

Vermont Yankee and Seabrook Station EPZs Figure 1-1



Affected Towns in New Hampshire Figure 1- 2

Vermont Yankee

Town Plume & Ingestion	**Town Ingestion Only**	
Chesterfield	Gilsum	New Ipswich
Hinsdale	Goffstown	New London
Richmond	Goshen	Newbury
Swanzey (Westport Section)	Greenfield	Newport
Winchester	Greenvile	Peterborough
	Hancock	Rindge
Town Ingestion Only	Harrisville	Roxbury
	Henniker	Sharon
Acworth	Hillsborough	Stoddard
Alstead	Hollis	Sullivan
Amherst	Hopkinton	Sunapee
Antrim	Jaffrey	Surry
Bedford	Keene	Sutton
Bennington	Langdon	Temple
Bradford	Lempster	Troy
Brookline	Lyndeborough	Unity
Charlestown	Marlborough	Walpole
Claremont	Marlow	Warner
Cornish	Mason	Washington
Croydon	Merrimack	Weare
Deering	Milford	Westmoreland
Dublin	Mont Vernon	Wilton
Dunbarton	Nashua	Windsor
Fitzwilliam	Nelson	**HOST SITES:**
Francestown	New Boston	Keene High School

Seabrook Station

Town Plume & Ingestion	**Town Ingestion Only**		
Brentwood	Bedford	Greenfield	Northfield
East Kingston	Belmont	Greenville	Northwood
Exeter	Boscawen	Hampstead	Nottingham
Greenland	Bow	Henniker	Pelham
Hampton	Brookfield	Hollis	Pembroke
Hampton Falls	Brookline	Hooksett	Pittsfield
Kensington	Candia	Hopkinton	Plaistow
Kingston	Canterbury	Hudson	Raymond
New Castle	Chester	Lee	Rochester
Newfields	Chichester	Litchfield	Rollinsford
Newton	Concord	Londonderry	Salem
North Hampton	Danville	Loudon	Sandown
Portsmouth	Deerfield	Lydenborough	Somersworth
Rye	Deering	Madbury	Strafford
Seabrook	Derry	Manchester	Wakefield
South Hampton	Dover	Mason	Weare
Stratham	Dunbarton	Merrimack	Webster
	Durham	Middleton	Wilton
Town Ingestion Only	Epping	Milford	Windham
Allenstown	Epsom	Milton	Wolfeboro
Alton	Farmington	Mont Vernon	
Amherst	Francestown	Nashua	**HOST SITES:**
Atkinson	Fremont	New Boston	Rochester Middle School
Auburn	Gilford	New Durham	Dover Middle School
Barrington	Gilmanton	Newington	Manchester Memorial High
Barnstead	Goffstown	Newmarket	Southside Middle School

Estimated Populations of 10-mile EPZ Communities Figure 1-3

Municipality	2010 Census	Peak Season Population*
Vermont Yankee		
Chesterfield	3,640	
Hinsdale	4,046,	
Richmond	1,155	
Swanzey (all)	2,145	
Winchester	4,341	
Total	**15,327**	
Seabrook Station		
Brentwood	4,486	4,827
East Kingston	2,357	2,382
Exeter	14,306	16,237
Greenland	3,549	3,846
Hampton	14,976	17,498
Hampton Beach South		19,611
Hampton Falls	2,236	3,036
Kensington	2 124	2,124
Kingston	6,025	6,225
New Castle	968	1,361
Newfields	1,680	1,870
Newton	4,603	4,603
North Hampton	4,301	4,840
Portsmouth	21,233	24,398
Rye	5,298	5,809
Seabrook	8,693	9,189
South Hampton	814	1,450
Stratham	7,255	7,266
Total	**91,180**	**136,572**

Source:

2010 Population Estimates of New Hampshire Cities and Towns
Prepared by The New Hampshire Office of Energy and Planning
Date of Publication: March, 23, 2011
The Office of Energy and Planning (OEP) is required by Law (RSA 78-A:25) to estimate the population of the State's municipalities on an annual basis. The law stipulates that the estimates be certified to the State Treasurer by August 19th and that they reflect population levels of the preceding year. Further, the law requires that the definition of resident be the same as that of the US Decennial Census.
* Peak Season Summer Weekend – Figures are derived from 2010 These figures are subject to update as part of the continuous planning process.

Estimates of Numbers of Pets/Service Animals

Population x 20% (number who would go to reception center) / 2.5 = number of households x60% national average of number of households that own pets

SS = 91,180x20%=18,236/2.5= 7294.4x60% = 4377 animals
VY = 15,327x20%=3065/2.5=1226x60% = 736 animals.

C. Planning Basis for Seabrook Station

1. Emergency Response Planning Areas - SS (ERPAs)

The 10-mile Emergency Planning Zone (EPZ) surrounding the Seabrook Station nuclear power plant is subdivided into seven Emergency Response Planning Areas (ERPAs). These ERPAs are utilized in the Protective Action Decision (PAD) process and in developing Protective Action Recommendations (PARs) in the event of an emergency at SS. ERPA B and ERPA E cover communities in the Commonwealth of Massachusetts and any Protective Action Decisions (PADs) or Recommendations (PARs) would be governed by the Massachusetts RERP.

ERPA	Communities Comprising ERPA	Figure 1.4
A	Hampton Falls, Seabrook, Hampton Beach	
B	Amesbury, Salisbury	
C	Kensington, South Hampton	
D	Hampton, North Hampton	
E	Merrimac, Newbury, Newburyport, W. Newbury	
F	Brentwood, East Kingston, Exeter, Kingston, Newfields, Newton	
G	Greenland, New Castle, Portsmouth, Rye, Stratham	

Figure 1-5

2. Assignment of Host Communities to Local EPZ Communities (SS)

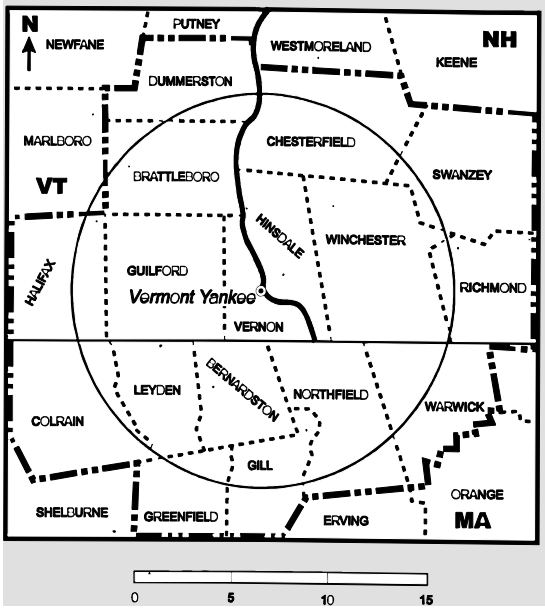
New Hampshire

Dover – Greenland, Hampton, Hampton Falls, New Castle, North Hampton, Rye
Manchester – Brentwood, East Kingston, Exeter, Hampton Beach*, Kensington, Kingston, Newfields, Newton, Seabrook, South Hampton, Stratham.
(* transient population)
Rochester – Portsmouth

D. Planning Basis for Vermont Yankee (VY)

The Vermont Yankee EPZ has been divided into sectors, corresponding to sixteen standard compass directions. The bearing of each sector is indicated by the letter or letters denoting the compass point. Each sector includes 221/2°. Sectors are used by the State of New Hampshire in locating the plume and in the protective action decision-making process. Protective actions are implemented on a whole town basis.

Figure 1-6



N	**A**
NNE	**B**
NE	**C**
ENE	**D**
E	**E**
ESE	**F**
SE	**G**
SSE	**H**
S	**J**
SSW	**K**
SW	**L**
WSW	**M**
W	**N**
WNW	**P**
NW	**Q**
NNW	**R**

NEW HAMPSHIRE POPULATION CENTERS WITHIN THE VY 10 mile EPZ

Figure 1-7

Town	Sector Identification (Miles from Site)	Affected by Winds Blowing From
Chesterfield	A and B (6-10), C (6-10)	SSE-WSW
Hinsdale	R,A and B (0-6), C (0-4), D and E (0-3), F (1-4), G (2-5)	ALL DIRECTIONS
Richmond	D,E and F (9-10)	WSW-WNW
Swanzey	C (8-10), D (9-10)	SSW – W
Winchester	R (6-8), A and B (5-10), C (6-10)	S-NW

Chapter 2 – THE RADIOLOGICAL RESPONSE ORGANIZATION

I. General:

The ultimate authority for the welfare of the citizens and continuity of the government of the State of New Hampshire rests with the Governor. Under the emergency management system of the State, as authorized by the New Hampshire Emergency Management Act (RSA 21-P:34, as amended) and the SEOP (which is published under the directive of the Governor), each state agency, non-governmental organization (NGO) and private sector partner, assumes primary or support responsibilities under an ESF structure. The Nuclear Planning and Response Program (RSA 107-B, as amended) provides the authority for the Governor and HSEM Director to develop and implement the NH Radiological Emergency Response Plan for fixed nuclear facilities. RSA 21-P:34 and RSA 21-P:35 VIII, provides the Governor with sufficient authority to implement all provisions of RERP. The NH Constitution and RSA 21P:37 grants extraordinary powers to the Governor upon declaration that an emergency exists including the implementation of protective measures which may be necessary. In the event the Governor is not available, RSA 21-P:37 (V) permits an emergency succession line to be established by regulation. (See SEOP, Section V-64)

The organizational structure that the State of New Hampshire will use in response to a radiological emergency, including at a commercial nuclear power plant, is described in Section C, State Emergency Response of the New Hampshire State Emergency Operations Plan. A Unified Command will be established at the State Emergency Operations Center (SEOC) in Concord, N.H., led by a Governor-appointed representative, the Director or Asst. Director of HSEM. Primary decision-making agencies are the Governor's Office, HSEM, and representative of Division of Public Health Services. During emergency response, agencies may be asked to take actions which require a legal basis. Many of these actions are within the agency's normal sphere of legal authority.

Staffing for the SEOC, to ensure a continuous 24-hour operation for a protracted period of time, will be according to established operating procedures. The ESFs (as identified by their designee) are responsible for assuring continuity of their respective agencies' resources to ensure 24-hour emergency operations for an extended period of time. Each is also responsible for the development of a 24-hour roster (usually 2 shifts) for their ESF/Support Agency. All response organizations must be capable of staffing a 24-hr. emergency communications and response operation for an extended period of time including access to resources available. ESF Lead Agencies are responsible for notification and activiation of their appropriate support agencies based upon the needs of the incident.

II. State Emergency Response Organization (ERO):

The New Hampshire State ERO is comprised of various levels of government integrated and acting in concert with each other and with supporting/service agencies and organizations utilizing ICS and the multiagency coordination system. State agencies and several voluntary organizations comprise the various ESFs and are empowered to deploy the resources of their agencies and those of the ESF entity to carry out missions that are assigned to them by function on a 24-hour basis. Each agency has a designated individual (by title) who is ultimately in charge of the emergency response of the organization. (See A–I).

Within the local municipalities, the Board of Selectmen, City Council, or other appointed officials, acting through their local Emergency Management Director (EMD), as applicable, are responsible for the local RERP and for emergency response during a radiological emergency according to RSA 21-P:39. Neither local officials nor local EMDs have the authority to declare an emergency pursuant to RSA 21-P:35. Each of the local RERPs specifies the responsibilities delegated to municipal organizations and officials. Local actions are subject to HSEM direction and coordination during an emergency response in accordance with RSA 21-P:34. In the event that a municipal government for whatever reason is unable to fulfill its responsibilities pursuant to the local Radiological Emergency Response Plan (RERP), the State of New Hampshire will provide such assistance as necessary.

The responsibility for protective action decision-making rests with the State. The responsibility for the implementation of protective actions is a coordinated effort between the state and EPZ communities and the support/service organizations.

A. Governor's Office:

- Retains all duties and authority as chief executive officer for the State of New Hampshire (not passed to a designee).
- Delegates command and control operations to HSEM in an emergency.
- Makes final decisions on appropriate protective measures based upon HSEM/DPHS recommendations, including evacuation.
- Primary spokesperson for the State.

B. Unified Command:

ESF#5 – Emergency Management - HSEM, Lead
(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and Attachment A – Implementing Procedures for State Agencies).

Responsible Individual: Director or designee

- Establish Unified Command of incident.
- Lead Agency for ESF#5 – Emergency Management, supported by all ESFs.
- Commands and controls emergency response operations on the Governor's behalf.
- Provide staffing for all Command and General Staff (with the exception of a representative from an ESF for Unified Command.)
- Recommend protective response measures that should be implemented.
- Manage recovery and re-entry efforts after the emergency has been terminated.
- Ensures radiological monitoring training and equipment (dosimetry) to support state and local responders.
- Provide the vehicle through which federal assistance is requested.
- Develops and maintains the *State Emergency Operations Plan* and its accompanying *Incident and Support Annexes*, including the *Radiological Emergency Response for Nuclear Facilities Incident Annex.*
- Assist with emergency situations at Portsmouth Naval Shipyard, upon request.

C. Unified Command:

Department of Health & Human Services, Division of Public Health Services, Radiological Health (DPHS/RadHealth)

Responsible Individual: Director of Public Health Services, or designee

- Assess, control and help prevent exposure to radiation from both natural and man-made radioactive materials in NH.
- Become the primary radiological emergency division for assessment of health hazards during peacetime radiological emergencies.
- Dispatch representatives to the EOF.
- Coordinate with ESF#10 and ESF#11 in the radiochemical analysis of water and agriculture products obtained from areas considered possibly/potentially contaminated due to possible or actual radiological releases. This includes sampling of shellfish harvesting areas.
- Coordinate distribution of radiological data and impact to the State and for local response organizations.
- Maintain liaison with State agencies, HSEM and nuclear power plants for planning and operational purposes.
- Develop policy for the use and distribution of potassium iodide (KI).
- Function to protect public health and safety, occupationally exposed persons, and the environment from unnecessary exposure to sources of radiation.
- Respond to accidents and incidents involving radiation sources. Radiological Emergency Response Teams are available to respond to any accident situation having to do with Vermont Yankee Nuclear Power Plant or Seabrook Station.
- Perform continuous environmental monitoring around Vermont Yankee, Seabrook Station nuclear power plants and Portsmouth Naval Shipyard (upon request). Provide an ambient surveillance program for evaluation of local environmental radiation levels. RadHealth's radiochemistry laboratory collects environmental and regulatory samples for analyses and reporting. Emergency environmental monitoring includes a radiological baseline and independent state capacity that is maintained on an on-going basis. The scope of the ongoing environmental monitoring program will be determined by DPHS, based upon the plan and best radiological health, environmental monitoring and radio-analytical practices.
- Recommend protective actions based on EPA guidelines (PAGs) for members of the public within the 10-mile EPZ and emergency workers.
- Coordinate collection of environmental samples from the 50-mile ingestion pathway EPZ.
- Provide criteria, technical support and authorization for the decision to relax protective actions and allow for recovery and reentry into the affected area.
- Provide regulatory oversight and guidance on radiological waste disposal.
- Provide oversight and guidance on radiologically contaminated weapons.
- Request assistance as needed, from other states through the New England Compact on Radiological Health Protection, and from federal support through the Department of Energy and the Federal Radiological Monitoring and Assessment Center (FRMAC), etc.

(Authorities: RSA 125-B, RSA 125-B:2, RSA 146:11, RSA 146-20, RSA 147-B)

In security-related or HAB incidents where there is no indication of or potential of a release, ESF#13 may assume the position of Unified Command with HSEM. In HAB incidents where it is not known if there is or may be a release ESF#13 may be assigned to the Unified Command with DPHS.

D. Risk Communities:

- Provide direction and control of the emergency response at the local level.*
- Prepare local standard operating procedures for response to emergencies at nuclear power plants.
- Provide for the safety of residents and transients through appropriate protective actions.
- Ensure that local notification methods exist for drills and emergency conditions.
- Ensure that procedures are in place for the control of radiological exposure of emergency workers and institutionalized members of the general public for whom evacuation from the affected area is not feasible.
- Ensure the municipality's ability to provide a continuous 24-hour operation of a local response for a protracted periods of time.
- *EPZ communities retain command and control within their jurisdiction. The highest elected official from each risk community has primary responsibility for their activity in the response activity. In many instances, these responsibilities may be delegated to the community's emergency manager. However, since a radiological emergency would potentially affect a number of communities and the legal authority for radiation protection resides with the Division of Public Health Services, N.H. Department of Health and Human Services, and the coordination of emergency response activities resides with HSEM, the State of N.H. has accepted overall command and control for this type of emergency response.

E. Host Communities:

- Jurisdiction in which evacuees from EPZ communities are "hosted" if all or parts of the towns are evacuated. The highest elected official from each host community has primary responsibility for their role in the response activity. In many instances, these responsibilities may be delegated to the community's emergency manager.
- "Hosting" refers to:
    - The registration of evacuees
    - Radiological monitoring
    - Decontamination of evacuees/service animals, vehicles, if necessary
    - Provision for the sheltering (care and feeding) of evacuees, as capable.
- Host communities are responsible for the activation of the reception centers and sheltering facilities within their communities. Activation will be in response to a request from the State Emergency Operations Center to the Host Community EOC.
- Host communities have been assigned by towns being evacuated. Expectations are that approximately 20% of the evacuated populations will require services at the reception centers. Mass care facilities (shelters or congregate care facilities) will plan for the number of individuals based on all-hazard sheltering experience and what is historically relevant for the affected area.

F. Emergency Support Functions:

Within the SEOP, each of the 15 Emergency Support Functions and Annexes is comprised of a "Lead" and several "Support Agencies." Each has functional responsibilities within the framework of a State response. Leads have the responsibility for ensuring a continuity of resources (including personnel) for a 24-hour response by their ESF or Support Function and activating those support agencies that may be necessary for response activity based upon the incident. For a complete listing of the ESFs and Support Annexes see the NH SEOP. (All ESFs may be activated during a REP event carrying out responsibilities that they have in an all-hazard response.) The primary ESFs and Annexes and primary agencies that will be involved with a radiological emergency/disaster, and/or have a specific function for response to an emergency/disaster at a fixed nuclear facility are:

1. ESF#1 – Transportation (Activated at ALERT)

(Primary Responsibilities in a Radiological Incident. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. Department of Transportation (DOT) – Lead Agency

Responsible Individual: Commissioner or designee

- Provide all available and obtainable transportation resource support for the ESF#1-Transportation mission to include:
  - Transportation equipment, facilities as listed in the SEOP Annex;
  - Vehicular traffic management and control signs and devices of various types (including for evacuation/surge);
  - Vehicular traffic flow data and information from permanent and temporary monitoring sites.
- Establish evacuation timetables for EPZ communities and others, as appropriate.
- Identify appropriate transportation staging areas for EPZ and others, as appropriate.
- Authorize and accomplish the lifting of State road tolls in a timely manner after notification by the SEOC of the evacuation timetables.
- Coordinate with the United States Coast Guard in accomplishing the lockdown of State moveable bridges in a timely manner after notification by the State Emergency Operations Center of the marina and residential evacuation timetable(s);
- Suspend and clear all construction and maintenance zones in a timely manner after notice of an evacuation/re-entry order.
- Coordinate the activation of traffic management plan(s) in a timely manner after prior notice of an evacuation/re-entry order.
- Provide public bus transportation capacities, and point of contact data by town.
- Provide connections with school bus contract firms for school children (when schools are in session) and for other mass transportation needs if not needed for children.
- Working with Administrative Services (Division of Plant and Property Management), maintain database of contracts and points of contact with private bus providers needed for evacuation.
- Provide staffing and resources necessary to conduct impact assessment of the impacted area.
- Provide for clearing of evacuation /re-entry routes. Coordinate with town/municipal public works/road departments to assure local roads are kept clear. (ESF#3 – Public Works and Engineering)
- Provide multi-modal transportation engineering, technical and specialty support and coordination.
- Develop and maintain up-to-date evacuation mapping, routing, compensatory plans and information for EPZ communities and others as appropriate and required.
- Coordinate activities between public and private agencies on matters relating to public transit.
- Work with Department of Education and SP Troop G for access to buses and drivers, including those for specialized transportation.
- Support public transportation services where emergency services are required.
- Support town/municipal highway/road departments in securing and installing barricades, signs, and other necessary equipment needed for traffic control.
- Support movement of emergency resources to and from the designated area.
- Maintain readiness at impacted districts and headquarters

  - **DOT Headquarters in Concord, N.H.**
  - **District 4 in Swanzey (VY)**
  - **District 6 in Durham (SS)**

a.1. Department of Transportation, Division of Aeronautics

- Coordinate air transportation support and evacuation.
- Maintain database of all state-owned aviation assets for identification of those in impacted area.
- Contact Federal Aviation Agency (FAA) regarding impact on air space over impacted area. FAA will issue no-fly zones and notification as appropriate.
- Identify and maintain lists of all public and private airports, heliports and hospital heliport data including location, elevation, navigation and communication aids, runways, maximum aircraft size and weight, aviation fuel availability, owner-operated points of contact to assist in possible evacuation/re-entry.

a.2 Department of Transportation, Division of Rail and Transit

- Identify and maintain railroad transportation systems data and points of contact.
  - Amtrak is within the Seabrook Station 10-mile EPZ.
  - State of Vermont is responsible for contacting railways associated with VY.
- Relay evacuation/protective action information to any rail lines in impacted area. Rail owners will make final decisions on protective actions instituted.
- Identify and secure as appropriate any rail transportation that may be needed for evacuation/re-entry.

b. Department of Safety, Division of State Police (SP) – Support Agency

Responsible Individual: Director or designee

- Assist DOT, HSEM with the development of evacuation/surge/re-entry routes. Be prepared to conduct route reconnaissance.
- Coordinate evacuation of impacted areas with DOT. Coordinate access control.
- Work with other state agencies and local law enforcement to assure warnings/alerting, evacuation of and establishing security/traffic perimeters/zones on/in shorelines, salt and fresh waterways, parks and recreational areas and wild-lands.
  - **U.S. Coast Guard (Responsible Individual-**Area Commander) – responsible for navigable rivers (including Connecticut), federal waterways and vessels on them. Control EPZ by sea. The Coast Guard has agreed to assume responsibility for notification and removal of marine traffic (commercial and pleasure craft) within the SS Plume Exposure Pathway (EPZ). Provide seaport data such as location, nav-comm aids, docking and cargo capabilities, and owner-operator points of contact.
  - **Department of Safety, Marine Patrol (Responsible Individual –** Director or designee) – State's waterways, harbors, marinas
  - **Department of Fish and Game (Responsible Individual –** Director or designee) – State's waterways, remote areas and wild-lands, assist with National forests.
  - **Department of Resources and Economic Development (Responsible Individual –** Commissioner or designee) – State-owned lands and parks and recreational areas. Can also provide communication/information to private sector.
    - Facilitate flow of information to local law enforcement officials.
    - Working with DOT, maintain up-to-date evacuation/re-entry mapping, routing and information for EPZ communities and others as appropriate and required.
    - Coordinate and control emergency highway traffic regulations in conjunction with other ESF#1-Transportation agencies.
    - Coordinate law enforcement support for activating, maintaining and deactivating traffic management plans for ordered evacuations and re-entry.
    - Coordinate law enforcement escort/support emergency materials, supplies, and personal vehicles, singularly or in convoys.
    - Provide security and assist in staffing roadblocks and traffic control to support local/county/municipal personnel who are involved in radiological emergency response operations.

- Provide communications assistance as required (with ESF#2 – Communications and Alerting)
- Activate appropriate Troop/Districts:

- **Troop A in Epping (SS)**
- **Troop C in Keene (VY)**

c. Department of Safety, Emergency Medical Services (EMS) – Support Agency

Responsible Individual – Director or designee

- Assist in identification and provision of resources available for specialized transportation for evacuation and re-entry into impacted area, as requested.
  (ambulances, wheelchair vans, etc.)
- Assist in transportation of human remains.
- Coordinate ambulance service for accidents and other medical crisis in and near the EPZ.
- Provide transportation of non-ambulatory individuals needing ambulance services from the EPZ
- Provide transportation of individuals needing treatment to hospitals with radiological treatment capabilities.
- Provide for licensures of emergency medical care providers.
- Assist in provision of mutual aid for evacuated/impacted population.
- Assist in training of individuals assigned responsibility for transportation of special/functional needs populations.

d. Department of Education – Support Agency

Responsible Individual – Commissioner or designee

- Assist in the coordination with and provide information to affected School Administrative Units (SAU).
- Assist in the provision of busses and drivers, as requested/capable.
- Assist in the emergency response and coordination of the evacuation of school children from the affected area.

e. State Transportation Staging Areas (STSA) for Evacuation:

Seabrook Station – Rockingham Cty. Court House, 10 Rte. 125, Brentwood, N.H.. Rockingham County Sheriff's Department will set up and operate this staging area and coordinate ambulance response with Dept. of Safety, Division of Emergency Medical Services (EMS).

Vermont Yankee – First Student Facilities, 43 Whittemore Farm Rd., West Swanzey. First Student will set up and operate this staging area and coordinate ambulance resources with EMS.

2. ESF#2 – Communications & Alerting (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. Department of Safety, Division of Emergency Services, Communication and Management, Bureau of Emergency Communication - Lead Agency

Responsible Individual – Bureau Chief or designee

- Forward and coordinate inquiries and information received from the public to HSEM. (HSEM will provide the Bureau with information on the emergency and recommended protective actions and public information [coordinated with DPHS] through the PIO).

b. Department of Safety, Division of State Police, Support Services Bureau, Headquarters Communications Unit - State Primary Warning Point – Support Agency

- Function as the State Primary Warning Point.
- Central communications link by which the utilities notify the State of an emergency status at the plants.
- Notifies key personnel in the State Emergency Response Organization of an emergency at the nuclear facility.
- Provide back-up 24-hour capability to activate the SS EPZ sirens and PANs.
- Provide back-up communication support on an as needed and capable basis.

c. Rockingham County Dispatch – Support Agency

Responsible Individual – Sheriff or designee

- Provide communication links between state and local government officials in the Seabrook Station Plume Exposure Pathway EPZ.
- Operate multi-town emergency communication system.
- Activate SS EPZ sirens at the direction of HSEM Director or designee.

d. Southwest NH District Fire Mutual Aid – Support Agency

Responsible Individual – Chief or designee

- Provide communications links between the State and the officials of local governments in the VY Plume Exposure Pathway EPZ.
- Activate the sirens upon the decision of HSEM Director or designee.
- Coordinate ambulance services upon request from EMS.

e. Cheshire County/Hillsborough County Sheriff's Department – Support Agency

Responsible Individual – Sheriff or designee

- Provide back-up communications links between the State and Southwest NH District Fire Mutual Aid/Rockingham County Sheriff and the local law enforcement agencies in the VY/SS Plume Exposure Pathway EPZ. May function as primary notification point for some EPZ communities.

f. NH ARES/NH TERT – Support Agency

- Provide amateur radio support to meet/ensure that the communications needs of the response organizations and facilities are met.
- Provide trained communication specialists to augment resources upon request.

g. WOKQ, WKNE Radio - Support Agency

Responsible Individual: Station Manager

- Provide broadcasting and notification support for EAS/EPI.

h. Entergy, Vermont Yankee Nuclear Power Plant
NextEra Energy, Seabrook Station Nuclear Power Plant
Responsible Individuals – Plant Manager or designee

- Provide initial notification to State Warning Point within 15 minutes of an emergency declaration in accordance with the licensee's emergency operations procedures.
- Provide periodic updates of emergency status and plant parameters either to the SEOC or at the licensee's Emergency Operations Facility (EOF).

3. ESF#3 – Public Works and Engineering (Activate at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A, Implementing Procedures for State Agencies) – NH DOT Lead

a. Department of Environmental Services – Support Agency

- Provide information on water systems within the EPZ (municipal and individual) and the effect of a radiological accident on them.
- Establish and maintain communications with municipal water suppliers during the event.
- Provide assistance, as appropriate, for water supply testing.

4. ESF# 6-Mass Care, Housing and Human Services (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A, Implementing Procedures for State Agencies)

a. Dept. of Health and Human Services(DHHS), Division of Emergency Services - Lead Agency

Responsible Individual: Commissioner or Designee

- Ensure the coordination of sheltering activities and support services for evacuees with American Red Cross (Support Agency) and other organizations responsible for congregate care activities.
- Ensure the coordination, establishment, and operation of mass feeding for the population of impacted areas, to include: mobile feeding routes, fixed feeding sites, and at base camps, and comfort stations. (Coordinate with Volunteers and Donations Support Annex (SEOP)) and American Red Cross.
- With representatives from ESF#8 Health and Medical, provide information on pediatrics, functional needs evacuees and evacuees with coexisting illnesses or risk factors from the impacted area.
- Provide nutritional guidance on mass feeding, to include, specialized feeding concerns.
- Coordinate with DHHS-Division of Family Assistance to identify and provide income-eligible assistance programs in impacted area.
- Provide for assessable sanitary facilities, as needed, at reception center/shelters.

- Develop comprehensive human service policies and programs for response to and recovery from hazards associated with sources of ionizing radiation.
- Encourage, participate in, and conduct trainings, studies and research, as capable. Assist in development of RERP training as requested and appropriate.
- Ensure provision of mass care, housing and human services for a radiologically-impacted or threatened area and, in consultation with ESF 8 Health and Medical, make recommendations on impact of protective actions, as requested.
- Develop protocols to report the following:
  - Shelter and mass care service capacity
  - Impact area demand/needs for mass care, housing and human services.
  - Impact on the response/recovery capabilities by region/section/communities.
  - Estimated time for resumption of normal activities and services.
  - Status of major impacts on mass care, housing and human service infrastructure.
  - Explanation of ESF#6 - MCHHS planned actions and recommendations of agency actions.
  - The provision of food inspection and food safety at mass feeding sites (mobile and fixed) through coordination with ESF#8 – Health and Medical.
- Coordinate with ESF#8, ESF#14 – Long-Term Community Recovery and Mitigation and Volunteer and Donations Support Annex (in SEOP) to assure human service needs of the affected population are met. Provides referral services for evacuees.
- Authorize issuance of emergency food stamps, as appropriate.
- In coordination with the American Red Cross provide for registration of impacted populations presenting themselves at reception centers and congregate care facilities.

b. American Red Cross (ARC) or Community Shelter Organization – Support Agency

Responsible Individual: Regional Director or designee/Designee from EMD

- Provide for shelter (congregate care)assignments at reception centers for evacuees.
- Provide mass care and sheltering services for evacuees of impacted area.
- Work with Host Communities and Dept. of Education, as appropriate, to survey, qualify and identify adequate shelter facilities for projected evacuated populations.
- Provide for adequate staffing, maintenance, supply and logistical/equipment support for identified congregate care facilities.
- Work with SEOP ESF#8, ESF#14-Long-Term Community Recovery and Mitigation and Volunteers and Donations Support Annex (in SEOP), develop and help implement long and short term strategies for meeting the human service, housing and mass care needs of the impacted population.
- Assist in identifying and assessing the requirements for food on a two-phase basis: critical emergency needs immediately after the disaster and long-term sustained needs immediately after the emergency phase is over.
- Provide for mass feeding (fixed, mobile and at base camps and comfort stations.)
- Provide initial case management of impacted population (as presenting themselves) and conduct information and referral services to other community service providers as needed.
- Institute a reunification or messaging program for evacuees at reception and shelter facilities.
- Notify, request assistance from other American Red Cross components as required and necessary.

5. ESF#7 – Resource Support (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. Department of Administrative Services – Division of Plant and Property Management (Admin. Svs.) – Lead Agency

Responsible Individual – Commissioner or designee

- Provide information to Operations Chief and Planning Chief on effects of incident to any state facility, resource or capability.
- Arrange for all available and obtainable resources, including vehicles, equipment and specialty trained service support from within State agencies that may be capable of assisting the State in fulfilling requirements during an emergency situation.
- Maintain and be prepared to provide information concerning parking and storage areas that could be used for staging, categorizing, storing and distribution resources.
- Develop, maintain and execute contracts on behalf of the State of New Hampshire that may be appropriate/needed in emergency situations in support radiological response missions (public/private sector).

b. New Hampshire National Guard – Support Agency (for REP)

Responsible Individual – Adjutant General or designee

- Provide resources (personnel, equipment, etc.) to support the emergency operations of the state under the direction of the Governor.
- Provide bus driver pool, as able.
- Assist with emergency communications, public notification, evacuation, access control, monitoring of emergency workers, decontamination, medical services and re-entry assistance, as the need arises.
- Provide the Civil Support Team (CST) – field monitoring and decontamination, under the direction of DPHS.
- Provide trucks, helicopters, medical supplies and vehicles and communication equipment.
- Provide personnel for staffing of SEOP, including local liaison, mission assignment coordinator, general staff and command staff.

6. ESF#8 – Health and Medical (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. NH Department of Health and Human Services (DHHS)/ Emergency Services Unit /DPHS – Lead Agency

Responsible Individual: Commissioner or designee

- Provide overall coordination of interagency of ESF#8 – Health and Medical.
- Develop comprehensive policies and programs for health and medical needs at reception centers and mass care shelters.
- Prepare and maintain a list of medical facilities which have the capability to treat radiological contaminated individuals.
- Advise, consult and cooperate with other public agencies, affected groups and utilities, providing subject matter expertise.
- Assist ESF 1-Transportation in identification and prioritization of evacuation routes based on Accident Assessment data.
- Maintain contact and provide support for MS-1 Hospital activities.
- Provide, as requested, behavioral health support to emergency workers and affected populations.
- Assist with health and needs for special facilities, including childcare, assisted and long-term care facilities.
- Provide medical subject matter expertise for issues related to medical care, triage, screening, medical surge, functional needs populations and responder protection.
- Participate in, and conduct studies, training and investigation relating to the control of sources of ionizing radiation.
- Respond to any emergency that involves possible or actual release of radioactive materials in order to protect health, safety, and property.
- Coordinates the provision of medical referrals and medical care for standard shelters to include providing interim nursing support, maintenance and assurance of confidentiality of medical records, assist in making arrangements for essential medical equipment, evaluate and arrange for special medical diets.
- Work with Dept. of Education in identifying medical personnel from within the educational system to support emergency operations. The Department of Education can also function as the conduit for health and medical related information to/from School Administrative Units (SAUs), private and post-secondary institutions.
- Ensures the maintenance of sanitary conditions at any activated reception centers and mass care facilities.
- Provide for food inspection and food safety at mass care feeding sites in coordination with ESF#6 – Mass Care, Housing and Human Services.

(Authorities: RSA 161)

b. New Hampshire Hospital Association – Support Agency

Responsible Individual: NHHA Director (or designee)

- Maintain contact with area hospitals and arrange support as needed. Track capacity and activities.
- Encourage, participate in, and conduct studies, training and research relating to the control of sources of ionizing radiation.

c. MS-1 Hospitals: Cheshire Medical (VY), Elliot Hospital, Wentworth-Douglass (SS)

Responsible Individuals: Hospital Chief Executive Officer or designee

- Provide health and medical resources to individuals injured and/or contaminated .

7. ESF#10 – Hazardous Materials Response (Activated at Site Area Emergency)

(In Radiological Incidents, DPHS performs the responsibilities for Lead Agency for State response. Primary Responsibilities in radiological incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies. (Activities related to radiological monitoring/testing/analysis done with direction from DPHS.)

a. Office of the Fire Marshal – Lead Agency

Responsible Individual – Fire Marshal or designee

- Provide all available and obtainable hazardous materials (other than radioactive materials) resource support for the ESF#10 – Hazardous Materials Response mission.
- Coordinate hazardous materials response team deployments to, employment in, and redeployment from disaster area.**(Activation of Regional Haz-Mat Teams (Support)**
- Provide assistance for State and local operations involving HazMat incidents, as required and requested.
- Identify and train liaison teams.
- Ensure appropriate communications links are established with local or field elements, regional HazMat teams and other agencies, as required.

b. Department of Environmental Services (Waste Management)- Support Agency (Long-Term/Clean Up)

Department of Environmental Services (Water Resources & Quality) – Support Agency

- Provide health risk assessments on toxic and hazardous waste.
- Conduct prompt remediation activities to restore contaminated sites to productive use and to protect the environment and public health, as appropriate.
- Identify and train liaison teams.
- Assist in plume modeling as requested.
- Provide environmental impact guidance including those on water and waste water supply systems.
- Coordinate the use of potable water purification equipment and water transportation equipment, as requested.
- Assist local governments in the impacted area with restoring their water and wastewater treatment plants to an operational status.
- Determine what equipment can be utilized on beaches and shores of an affected area; and insure that additional damage to the beaches/shores does not result from improper clean-up techniques.
- Provide sampling support with FRMAC.

c. Department of Agriculture – Support Agency

- Provide collection, sampling and laboratory analysis assistance.
- Provide protective action recommendations.
- Assures sanitation measure involving food supplies.
- Coordinate and assist in the recommendation, communication, implementation of protective measure, and identification of relocation for pets and livestock at risk.
- Coordinate removal of livestock killed or contaminated during a hazardous materials release or natural disaster.

d. N.H. National Guard CST - Support Agency

Responsible Individual: Commanding Officer or designee

- Provide assistance to the State and Federal Officials in the monitoring, sampling and plume tracking during a radiological incident.

8. ESF#11 – Agriculture, Natural and Cultural Resources (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. Department of Agriculture, Markets and Food – Lead Agency

Responsible Individuals: Commissioner or designee

- Collect records of livestock, agricultural farms and food preparation centers in the Ingestion Exposure Pathway EPZ.
- Assist DPHS in providing regulatory resources for food handling, preparation, storage and distribution, especially for milk and milk source production facilities.
- Advise DPHS/RadHealth on location and number of food production and distribution facilities within 50-mile Ingestion Pathway EPZ.
- Issue orders regarding regulating food preparation and storage (e.g. order dairy cows to be put on stored feed, etc.) in conjunction with DHHS (ESF#8). Contact facilities to be regulated.
- Coordinate with DPHS to ensure, to the greatest extent possible, farmer's brochures are distributed to all farmers, food processors, and food distributors in Ingestion Pathway EPZ.
- Declare Agricultural Emergency for the State, as appropriate.

b. Disaster Animal Response Team (DART) – Support Agency

- Provide assistance for service animal/pet monitoring, decontamination and care for service animals/pets presenting at reception centers and mass care facilities. (requested through Local EOC to ESF#11 Lead).

c. County Extension Agents (Rockingham/Cheshire) – Support

University of New Hampshire, Dept. of Animal & Nutritional Sciences – Support Agency

- Assist Dept of Agriculture, Food and Markets in identifying farms and dairy producers within EPZ and in distribution of brochures and notification with appropriate information.

d. N.H. Dept. of Fish & Game – Support Agency

- In cooperation with DPHS, determine impact of radiological incident on hunting, fishing within EPZ, taking into consideration migratory trends, habitats, ranges, seasonal diets, etc.
- Make recommendations regarding potential impacts of radiological releases upon game and wildlife, the effects of such impact upon affected populations inside and outside EPZ, including cross-contamination, potential hunting/fishing regulations that may need to be instituted, etc.
- Make recommendations on and assist in development of both short and long-term actions and strategies regarding fish and game issues (including contaminated food products from fishing and gaming) that may arise from potential or actual contamination.

9. ESF#13 – Law Enforcement and Security (Activated at ALERT)

(Primary Responsibilities in Radiological Incidents. For comprehensive list of responsibilities see SEOP and REP Attachment A – Implementing Procedures for State Agencies)

a. Department of Safety, Division of State Police – Lead Agency

- Coordinate, integrate, and implement law enforcement planning and activities for the use of mutual aid and State resources.
- Maintain a list of special law enforcement equipment, especially trained personnel, and all regular, auxiliary and reserve law enforcement personnel and equipment in the state.
- Maintain liaison with state departments and agencies, and local law enforcement officials in order to achieve close coordination and cooperation in planning and operations in impacted area.
- Provide for security at State EOC and other affected State facilities.
- Facilitate flow of law enforcement information from State organizations to regional and local law enforcement officials.
- Coordinate crime prevention and control in impacted area with local and county officials.
- Seek and secure assistance from other state enforcement personnel, as may be required. Activate regional law enforcement assistance as needed (NESPAC).

* A representative of ESF#13 may assume a position in the Unified Command during a HAB or security-related event.

b. NH Department of Fish and Game – Support Agency

- Coordinate patrol activities with regional, state and local law enforcement officials.
- Support the NH State Police, regional and local law enforcement officials, and other law enforcement agencies with security and law enforcement activities within the impacted area.
- Assist in provision of evacuation in forestlands and waterways.

c. Department of Safety, Marine Patrol – Support Agency

- Provide law enforcement activities on all bodies of water in State having 10 acres or more, as well as rivers and tidal waters.
- Assist NH State Police in law enforcement and security activities within impacted area.
- Coordinate evacuation for state waterways and from coastal waters, in coordination with U.S. Coast Guard.
- Provide seacoast security.

d. Department of Resources and Economic Development (DRED)– Support Agency

Divisions of Forests and Land and Parks and Recreation

- Conduct evacuation activities in and closing of state/agency-owned parks, reservations and forests.
- Enforce all state laws for protection of persons and property on any DRED-controlled lands, including state forests and parks.
- Provide assets including communications, facilities, equipment, personnel and security during periods of activation.
- Assist the NH State Police in law enforcement and security activities within the impacted area.

During a radiological emergency, other ESFs and Support Annexes may be activated to carry out their "all-hazard" response activities.

III. Federal Organizations and Responsibilities

Federal assistance provided to the State and local governments in response to and recovery from a radiological incident will follow guidelines established in the current *National Response Framework (NRF), Nuclear/Radiological Incident Annex (NRIA), May, 2013*. The NH Wing of the Civil Air Patrol (activated through ESF#1), the U.S. Coast Guard, the Federal Emergency Management Agency (FEMA) and the Federal Aviation Administration (FAA) are those federal agencies that play a direct role in the State of NH emergency response effort, but it is not inclusive of all agencies that may be called upon. All requests for federal non-technical assistance will be channeled through the Governor's authorized representative (HSEM Director or designee) and coordinated with other impacted states.

A. Purpose

The Nuclear/Radiological Incident Annex (NRIA) to the *National Response Framework (NRF)* describes the policies, situations, concepts of operations, and responsibilities of the Federal departments and agencies governing the immediate response and short-term recovery activities for incidents involving release of radioactive materials to address the consequences of the event. These incidents may occur on Federal-owned or licensed facilities, privately owned property, urban centers, or other areas and may vary in severity from the small to the catastrophic. The incidents may result from inadvertent or deliberate acts. The NRIA applies to incidents where the nature and scope of the incident requires a Federal response to supplement the State, tribal or local incident response.

B. Scope

The NRIA applies whenever a Federal response is undertaken unilaterally pursuant to Federal authorities, or when an incident exceeds or is anticipated to exceed State, tribal, or local resources. The level of Federal response to a specific incident is based on numerous factors, including the ability of State, tribal, and local officials to respond; the type, amount, and custody of (or authority over) radioactive material involved; the extent of the impact or potential impact on the public and environment; and the size of the affected area.

C. Federal Technical Assistance

The Division of Public Health Services', Radiological Health Section will conduct, oversee, and coordinate radiological accident assessment activities using its resources and the resources of other state agencies and organizations. Depending on the scope of the incident, additional technical assistance may be requested from the Department of Energy (DOE) under the Federal Radiological Monitoring and Assessment Center (FRMAC). Assistance is also available to RadHealth under the New England Compact on Radiological Health Protection (the Compact).

In all instances, request, control and coordination of all resources and personnel made available under the Compact will rest with RadHealth Director (or designee). Resources activated through FRMAC will coordinate directly with the State.

Figure 2-1

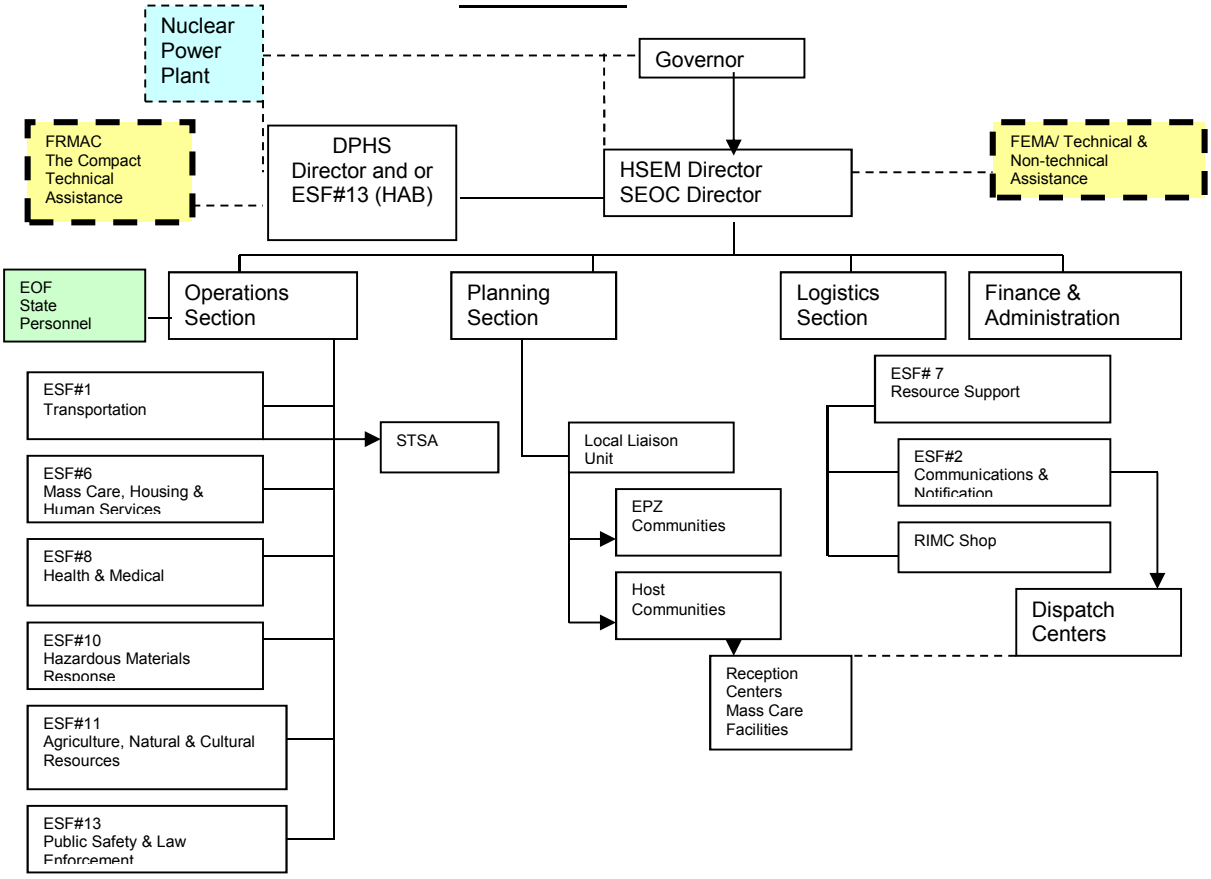
Federal Agency	Approx. Response Time	Comment
NRC	3-6 hours	Region I response team
FEMA	3 hours	Region I SLO/ESFs/IMAT
DOE	1 hour	Telephone contact, Consequence Management Home Team (CMHT)
FRMAC (first response)	3-4 hours	Radiological Assistance Program (RAP) Team
FRMAC	4-6 hours	Consequence Management Response Team (CMRT-1)
	Within 24 hours	Full FRMAC Support
USCG *SS Only	Immediate	Emergency message broadcast on marine band frequencies.
	1 ½ – 2 ¾ hours	USCG boats in Plume Exposure Pathway EPZ waters
FAA	Immediate	Emergency message broadcast on aviation frequencies

D. State Support for Federal Assistance

Upon activation of the FRMAC, the NRC, FEMA and DOE will dispatch personnel to the appropriate emergency response facility (Chapter 8 – Emergency Facilities and Equipment). The State operates a SEOC which is equipped to provide support for FEMA representatives. The licensee operates an EOF which will support NRC and State of New Hampshire emergency response personnel. The primary technical liaison between federal, plant, and state representatives will occur in the EOF. A communication link will be established between the EOF and the SEOC in Concord. Radio frequencies and telecommunications centers will be available at the SEOC through the ESF#2 – Communications and Alerting.

Logistical requirements for FEMA and FRMAC will be obtained by their respective logistical representatives.

NH ORGANIZATIONAL CHART FOR COMMERCIAL NUCLEAR POWER PLANT EMERGENCY Figure 2-2

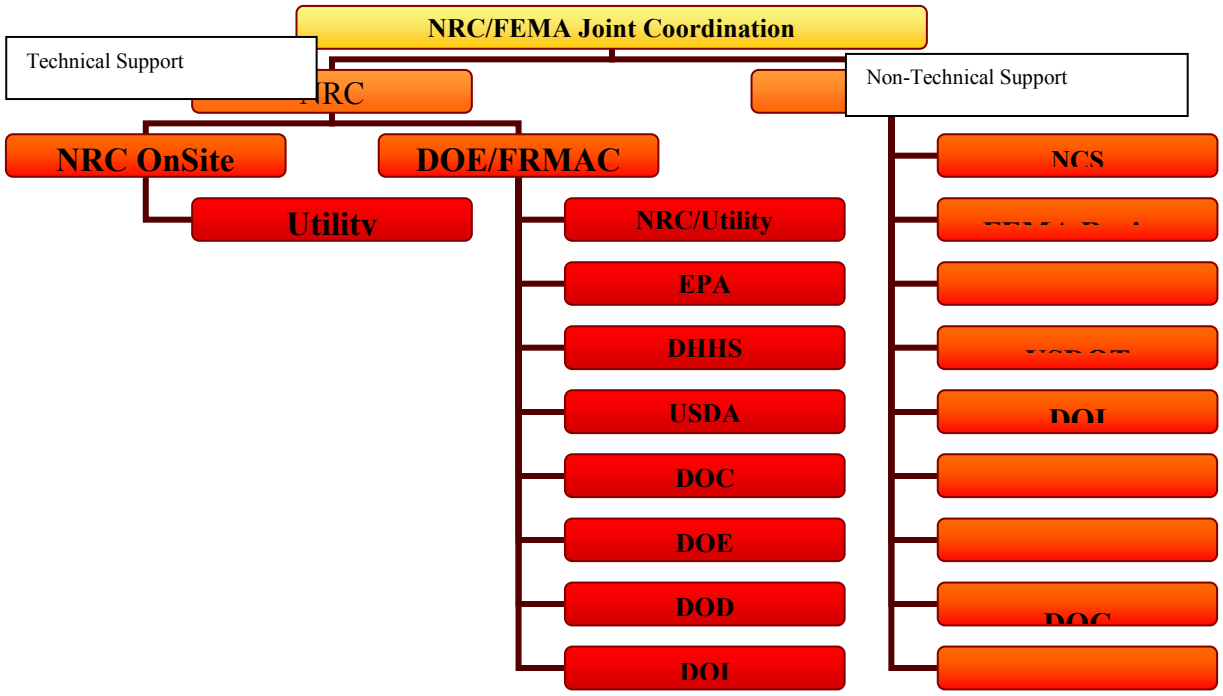


PRIMARY AND SUPPORT RESPONSIBILITIES MATRIX Figure 2-3

Responsibility/ Responder	Gov. Office	HSEM ESF 5	ESF 1	ESF 2	ESF 6	ESF 7	ESF 8	ESF 10	ESF 11	ESF 13	Risk/ Host	Licensee
Command and Control	P	P					S				P	
Alerting & /Notification		P		P						S	P	P
Communications		S		P		S					P	P
Accident Assessment		S				S	P		S			P
Protective Response	P	P					P		S		P	S
Public Information	P	P							S		P	P
Radiological Exposure Control		P				S	P				P	S
Emergency Medical Services						S	P				P	
Public Health and Sanitation					S	S	P		S		P	
Law Enforcement & Security			S			S				P	P	P*
Transportation			P			S					P	
Traffic Control			P			S		S		P	P	
Fire & Rescue		S		S			S	P		S	P	
Local ICS (HazMat)												
Social Services					P	S	S		S		P	

P= Primary S = Support
ESF#1 – Transportation; ESF#2 – Communications/Alerting; ESF#6 – Mass Care, Housing and Human Services; ESF#7 -Resource Support; ESF#8 – Health and Medical; ESF#10; ESF#11– Agriculture; ESF#13 – Public Safety & Security
P* - Nuclear Facilities retain primary responsibilities for on-site security.
Fire & Rescue = Local ICS in which local communities are first on scene and are primary until request to State occurs. DHHS becomes primary for ESF#10 in radiological incidents only.

FEDERAL EMERGENCY RESPONSE SUPPORT ORGANIZATION Figure 2-4



E. Security Related Incidents

In security-related incidents, an Incident Command Post may be established. The first responder on scene assumes the responsibility of Incident Commander until the Town of Seabrook Police Chief arrives who will then assume the position of Incident Commander. The Incident Commander will establish the Incident Command Post in a safe area at or near the scene. By agreement, a Unified Command may be established at the ICP as soon as feasible. The Unified Command will expand or contract under the ICS System based on the jurisdiction or incident needs. Radef Officers will be assigned to ICPs and/or Staging Areas to ensure proper issuance of dosimetry and protective actions information.

Chapter 3 - DIRECTION AND CONTROL

I. General

This chapter describes the coordination and management of the emergency response among the State and local governments for a commercial nuclear power plant emergency. The organizational charts reflecting the functional relationships between State agencies and local governments for a power plant is shown in **Chapter 2** (The Radiological Response Organization), **Figures 2-2 and 2-3**.

RSA 107-B is intended to protect the health and welfare of New Hampshire citizens through the initiation of a program to provide for the formulation of a Radiological Emergency Response Plan and procedures for its implementation. While the lead responsibility belongs to HSEM, affected local units of government are expected to cooperate in the response effort. In response to extreme emergency situations, emergency management in local municipalities and organizations are authorized to exercise emergency powers without regard to time-consuming procedures and formalities prescribed by law, with the exception of mandatory constitutional requirements.

II. Concept of Operations

A. Local Government Role

In the event of an accident at either Seabrook Station or Vermont Yankee, local emergency response organizations become part of the coordinated offsite emergency response organization (ORO). Emergency Planning Zone (EPZ) and Host municipalities will receive direction and information from HSEM during a nuclear power plant incident. These represent four Host Communities and twenty-two EPZ towns which are either totally or partially within the Plume Exposure Pathway.

Local governments have the primary role in implementing state-recommended precautionary/protective actions to reduce risks to the general public from an emergency at a nuclear power plant. The EPZ and Host communities affected by an emergency are responsible for directing the initial response to a radiological emergency situation. These communities will coordinate and direct such actions through their emergency management organizations and other local emergency response agencies.

As the emergency situation progresses, the State may assume authority, command and control. Based upon the severity of the incident, HSEM may draft a request to the Governor's Office for a declared State of Emergency.

It is anticipated that with an Unusual Event emergency classification the local governments will maintain primary responsibility for coordinating the emergency response within their communities. In the event that a municipal government, for whatever reason, is unable to fulfill its responsibilities pursuant to the local RERP, the State of New Hampshire will assume and carry out those responsibilities – Compensatory Plan. During a major emergency in New Hampshire, non-impacted municipalities may also be requested by HSEM to activate their emergency operation centers for provision of emergency assistance.

Local schools should be part of the Local EOCs. Their direction will come directly from the local EOCs with support provided to them in their activities by their School Administrative Units (SAUs) and the SAU Superintendent. Information will also be provided directly to the Superintendents by the Dept. of Education representative in the SEOC.

B. State Government Role

The role of State government in response to a nuclear power plant emergency is to support local government operations unless the scope of the emergency warrants increased State action. As Chief Executive of the State of New Hampshire, the Governor has ultimate command and control of state resources. In the event the Governor is unable to perform his/her duties, they will be performed by his/her successor as defined in the *New Hampshire State Constitution*.

Certain tasks are in the purview of the Governor's Office including overall command and control responsibilities, authorizing protective actions, coordinating state actions with other states involved, reviewing information provided by the State to the news media, and authorizing the start of the emergency's re-entry and recovery operations per RSA:21-P. In an emergency where the responsible facility is unable to control the situation as needed to protect public health and safety, the Governor may regulate the facility under the provisions of RSA 107-B:6.

The Governor, additionally, has the power to delegate any administrative authority as necessary to efficiently implement command and control responsibilities and any required emergency response measures within the State. A precautionary or protective action may be ordered by the Governor, or designee, to protect public health. Subsequently, HSEM can implement the evacuation. In authorizing measures necessary to ensure the safe return/re-entry of the general public and recovery of areas that had been radiologically affected, the Governor or designee must ascertain that conditions at the nuclear power plant have significantly improved and that no further threat to the public health and safety exists. If these conditions are met, then the Governor or designee may authorize the initiation of return of the general population.

HSEM, on behalf of the Governor, is responsible for supporting the Governor's Command and Control. This includes the activation of state emergency response facilities and requesting activation of other ORO facilities, directing and coordinating operations as the emergency develops, recommending and implementing precautionary or protective actions (in cooperation with RadHealth), coordinating local, state, regional, and federal assistance, providing media support, managing the recovery/re-entry activities, conducting communications planning and public education, offering/providing training of emergency response personnel, providing and maintaining dosimetry and radiological monitoring equipment to state and local responders and assuring the development and maintenance of the RERP. Government response is coordinated by HSEM from the State Emergency Operations Center. (See Chapter IV Concept of Operations in the NH SEOP).

As the primary subject matter experts and by statutory requirement, DPHS will appoint a member from Public Health Services to the Unified Command at the SEOC.

Chapter 4 EMERGENCY CLASSIFICATION SYSTEM

I. General

Four classes of emergency in increasing order of significance are established: Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency. These form a major part in the determination in the level of activation of the emergency response organization.

II. Emergency Classification and Radiological Incident Phases

These classes of an emergency at a nuclear power facility could develop sequentially; however, the possibility exists that the first indication of a problem could result in immediate declaration of any of the emergency classes. HAB events may escalate rapidly throughout the classifications and/or no release. Some of the incident initiators from the plants include security-related events. The facilities have identified Emergency Action Levels (EALs) related to those that could result in emergency declarations.

A. Unusual Event

Class Description:
Events are in process or have occurred which indicate a potential degradation in the level of safety of the plant or indicate a security threat to facility protection has been initiated.

Release Potential:
No releases of radioactive material requiring offsite response or monitoring are expected.

Purpose:
The purpose of offsite notification is to assure that the first step in future response has been carried out, to bring the operations staff to a state of readiness, and to provide systematic handling of unusual event information and decision-making.

B. Alert

Class Description:
Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life-threatening risk to site personnel or damage to site equipment because of a HOSTILE ACTION.

Release Potential:
Any releases of radioactive materials are expected to be limited to small fractions of the Environmental Protection Agency Protective Action Guide exposure levels.

Purpose:
The purpose of this classification is to mobilize emergency personnel to ensure they are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required, and provide offsite authorities current information on plant status and parameters.

C. Site Area Emergency

Class Description:

Events are in process or have occurred that involve actual or likely major failures in plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevent effective access to equipment needed for the protection of the public.

Release Potential:

Any releases of radioactive materials are not expected to exceed Environmental Protection Agency Protective Action Guide exposure levels beyond the site boundary.

Purpose:

The purpose of the Site Area Emergency declaration is to assure that emergency response organizations are operational, and to ensure that the public is notified and provided updates.

D. General Emergency

Class Description:

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility.

Release Potential:

Releases of radioactive material can be reasonably expected to exceed Environmental Protection Agency Protective Action Guideline exposure levels offsite for more than the immediate site area.

Purpose:

The purpose of the General Emergency declaration is to initiate predetermined protective actions and to provide updates for the public.

E. Radiological Incident Phases

An incident involving a radiological release contains three general phases:

1. **The early phase (plume or emergency phase):** The period at the beginning of a nuclear incident requiring immediate decisions for effective use of protective actions and must therefore usually employ the status of the nuclear plant and the prognosis for worsening conditions as their primary basis. Decision-makers may use predictions of radiological conditions in the environment based on the condition of the source or actual environmental measurements, as available. Precautionary actions may precede protective actions based on the PAGs. This phase lasts hours to several days and ends when the radioactive release ends.
2. **The intermediate phase:** The period beginning after the utility verifies the termination of the release. Decisions on additional protective actions may use reliable environmental measurements as a basis. This phase extends until the termination of these additional protective actions. This phase may overlap the late phase and may last from weeks to many months. The intermediate phase encompasses REP activities associated with both ingestion and relocation.
3. **The late phase:** The period beginning when recovery actions designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced, and ending upon completion of all recovery actions. This period may extend from months to years. REP activities associated with return and recovery occur during the late phase.

III. Emergency Actions

Based on plant conditions, the facility will designate and make notification of the appropriate emergency classification level (i.e., Unusual Event, Alert, Site Area Emergency, or General Emergency) and make a protective action recommendation.

A. Security Events/Emergencies at Nuclear Power Plants – Hostile-Action Based (HAB)

Security threat events at nuclear power generating facilities require detailed planning by onsite and offsite emergency management entities. Highly trained and heavily armed forces are used to repel and overcome or manage hostile terrorist threats made by aircraft, land and water based terrorist forces as well as internal threats of sabotage.

Upon verification of a hostile terrorist threat site security will notify offsite response organizations (ORO's) local law enforcement. The state warning point will subsequently be notified by the control room once the incident has been classified. Local law enforcement will establish, at a pre-designated location, an incident/unified command post (ICP). Communications will be established with onsite security and the fire brigade. Representatives from the onsite security and facility operations will station themselves at the unified command center (UCC) or ICP. Communications will be established with state emergency operations center (SEOC). Law Enforcement Tactical representatives from contiguous states will report to the Unified Command Post/ICP and act as communications liaisons to their respective states. Mutual aid representatives will report to the Staging Area. Representatives from the Federal and state law enforcement report to the unified command center or Staging Area as well as ORO fire service liaisons. Dosimetry will be issued at the ICP and the Staging Area. Just-in-time training for dosimetry use will be conducted upon issuance to response personnel. (HSEM will be responsible for Radef Officer(s) at Staging Area and the utility will be responsible for the Radef Officer(s) at the ICP.

The utility will establish procedures to allow emergency access to the utility grounds by off-site responders and law enforcement required to assist with the incident. To assist the plants in identifying responders that should be at the facility in the early phases of the event, responder organizations will provide their individuals with appropriate credentialing.

If onsite evacuation to an offsite location is necessary, the Incident Commander (if an ICP has been established), or the Town of Seabrook/Town of Vernon Emergency Manager will coordinate route selection with the appropriate State Transportation Departments, State and Local EOCs and Law Enforcement agencies and Site Security.

Staging areas will be established at pre-designated sites for law enforcement, fire and emergency medical services. Communications will be established between the unified command center/ICP and the staging area(s). Within a prescribed time the control room is required to provide the SEOC with an Emergency Classification Level (ECL) of Site Area Emergency (SAE) to General with an appropriate Protective Action Recommendation (PAR) based upon plant conditions.

In the event of a suspected Hostile Action Based (HAB) situation, "Sheltering in Place" (SIP) throughout the Emergency Planning Zone (EPZ) will be the immediate default Protective Action Recommendation (PAR). This pre-determined protective action *may* be expanded or otherwise modified depending upon the specific conditions existing at the time of the plant's EMERGENCY notification.

The SEOC and the utility will establish the regular Joint Information Center (JIC) but must also be prepared to establish a forward JIC on or near the power plant or a virtual or alternate JIC if it is not feasible to allow individuals to travel to or near the affected site.

The Incident Command Post is responsible for the security operations outside the power plant. The SEOC is responsible for supporting the ICP and command and control of all other ORO activities within the emergency Planning Zone (EPZ).

Figure 4-1

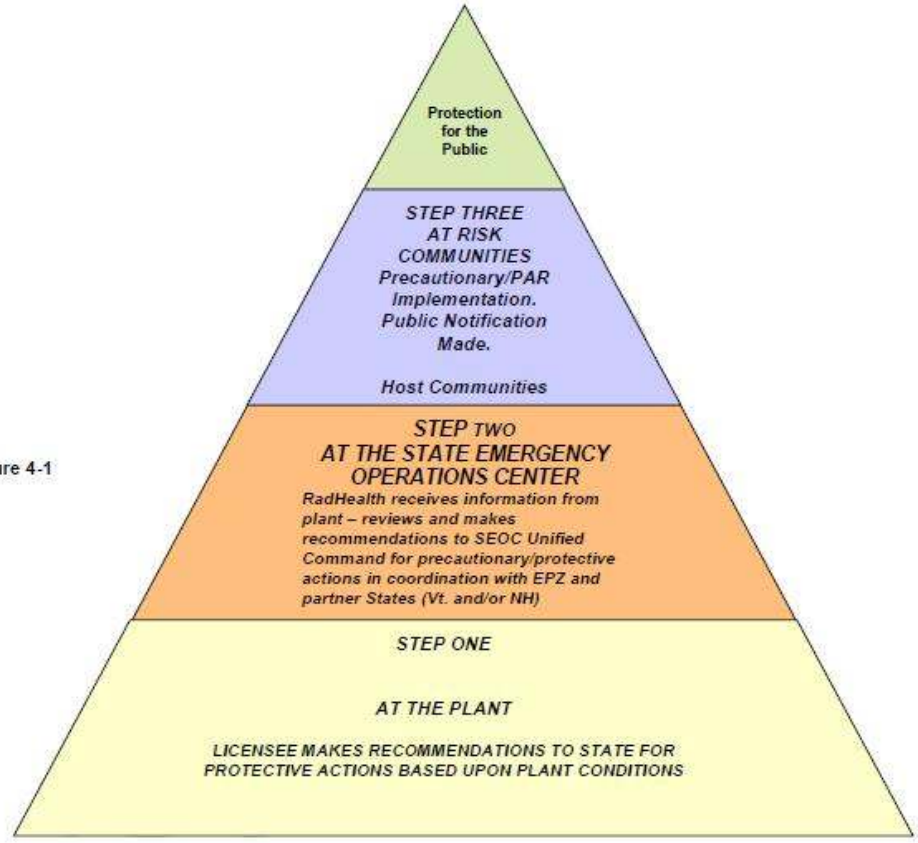


Figure 4-1: Protective Action Decision Flow Chart at the Emergency Operation Facility

Step3: The SEOC will make contact with the respective emergency operation centers for implementation and public notification concerning the Protective Action Recommendation(s). The SEOC contact the Host communities in the State and advise Massachusetts and/or Vermont of precautionary/protective action recommendations established.

Step2: The HSEM Director or designee at the SEOC (if operable), in consultation with DPHS/ RadHealth, will assess the Licensee's recommendation and formulate a joint Precautionary/Protective Action Decision.

Step 1: The Licensee will make a Protective Action Recommendation to the HSEM Director or designee at the SEOC (if operable), based on plant conditions.

Chapter 5 - NOTIFICATION AND ALERTING

I. General

The Department of Safety, Division of State Police, Headquarters Communication (SP Communications/Dispatch) is the designated State Primary Warning Point in the event of a radiological emergency. This is located in the State IPOC in Concord. As such, it is responsible for receiving notification of an emergency from the nuclear power plants, verifying information contained in the notification messages, and alerting the appropriate response personnel. SP Comm is also responsible for assisting local governments in providing warning and instructions to the general public. The State Police may receive initial warning of an event or classification from a nuclear power plant, the Federal Emergency Management Agency National Warning Center, local government, or the news media. If a determination that an event or emergency classification has occurred or is imminent, the State Warning Point staff will notify the appropriate key HSEM personnel, the DPHS Initiator and State agencies. (See SEOP, ESF#2 – Communications and Alerting).

In an HAB, the power plant security is required to notify local law enforcement and the control room of the security emergency. In turn, the control room operators are required to notify the state warning point after classifying the emergency. For an emergency classification triggered by a security-related event, OROs may initiate some response actions earlier than normal for a potential emergency. State officials (HSEM Director or designee) will confer with law enforcement and power plant personnel, as available to determine early actions. Early actions may be warranted due to increased public awareness and concern that may be generated as well as the increased potential for rapid escalation to a more severe classification.

When the determination has been made that State resources will be needed to supplement local resources, the HSEM Agency Liaison will notify the points of contact for each of the required ESF Lead Agencies with the direction of where to report (usually the SEOC). The ESF Lead Agency will be responsible for alerting and activating necessary personnel within their respective emergency support functions. This will ensure the State's ability to respond to an emergency situation on a 24-hour basis. (Contact information for each ESF is maintained by HSEM and routinely checked for accuracy). The State will function under the following levels of activation:

A. Levels of Activation - SEOC:

1. Level I - Monitoring Activation - Level I is typically a "monitoring" phase. In the event of a nuclear power plant emergency that is an Unusual Event classification, the State Emergency Operation Center will remain at a Level I. Notifications of ESFs and local municipal EOCs are made by HSEM.
2. Level II - Partial Activation - Level II is limited agency activation. In the event of a nuclear power plant emergency that has escalated to an Alert classification, the State Emergency Operation Center may be activated to this level. Mobilization of personnel for the IFO, EOF, JIC and other facilities occur.
3. Level III/IV - Full Scale Activation - Level III/IV is a full scale activation of the SEOC. In the event of a nuclear power plant emergency that has escalated to a Site Area or General Emergency classification, the State Emergency Operation Center will be activated to this level.

Specific details of activation of the State Emergency Operations Center are contained in the SEOP (Chapter IV, Section C State Emergency Response). No activation of the State Emergency Operation Center is anticipated for the Notification of an Unusual Event emergency classification; however, such action can be taken if deemed appropriate. The HSEM Director or designee will monitor the situation and be prepared to react if escalation to a higher classification is warranted or standby until verbal closeout of the emergency.

II. Notification and Activation

A. Initial Notification

Upon discovery and subsequent classification of emergency conditions at the nuclear power plant, the plant control room is to notify the New Hampshire State Primary Warning Point whose operators are on duty 24-hours. (Roster available upon confidential request) This notification, which is the initial notification to the NH ORO, is to be made within 15 minutes of an emergency classification.

NH State Police Dispatch personnel may receive the initial notification from the power plant on a non-secure, dedicated communications system (unencrypted). If it is received via the Nuclear Alert System (NAS), it will be considered valid and subsequent notification steps will be undertaken. If initial notification is made using any other communication system, verification of the authenticity of the message is required. Authenticity will be confirmed through contact by SP Comm to the facility control room.

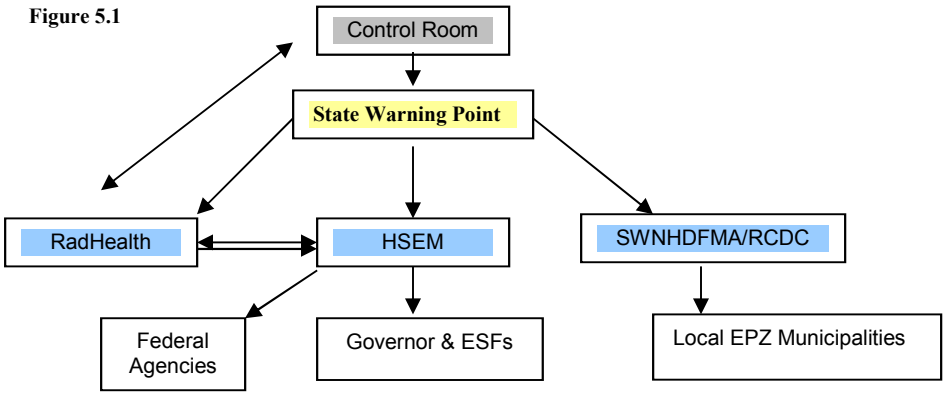
Once the message has been confirmed, SP Comm will contact:

- DHHS, Division of Public Health Services, Bureau of Radiological Health (RadHealth) which will verify plant status, date and time of declaration, current ECL, recommended emergency measures (including protective measures), brief description of events and any known prognosis for worsening or termination of event with the facility control room. RadHealth will brief HSEM based upon verified information.

- HSEM which will be responsible for notification to the Governor, state agencies and partners and may activate the state ORO. Partners within the ERO are notified of all ECLs by page via ESF#2 - Communications. Federal partners will be notified by HSEM based upon ECL (FEMA Region I – Alert or higher; USCG, CAP (if required) and FAA at Unusual Event or higher)

- Southwestern New Hampshire District Fire Mutual Aid (SWNHDFMA) for VY and Rockingham County Dispatch (RCDC) for Seabrook Station. These local dispatch centers will notify local government emergency response organizations. All EPZ communities have elected to be notified upon declaration of an "Unusual Event".

Figure 5.1



I

All organizations, as part of the NH ORO, must maintain a 24-hour communications capability adequate to ensure activation of personnel at any time.

*If the State Emergency Operations Center (SEOC) is already activated, all communications (including notification) will go through ESF#2 at the SEOC.

III. Public Alerting

Upon verification that a Site Area Emergency level has been declared by the plant, HSEM will order the activation of the initial audible alert to the public. (At the Alert level for SS, consideration may be given to notifying the beach population in Hampton and Seabrook by broadcasting pre-recorded messages over sirens in beach areas). The initial audible alert will be accomplished using sirens, Emergency Telephone Notification System and the Emergency Alert System (EAS) in the SS EPZ and EAS, Emergency Telephone Notification System and NOAA tone radio alert radios in the VY EPZ.
The purpose of the audible alert is to advise the public to tune to a designated Emergency Public Information (EPI) outlet to receive emergency instructions directly from state officials. The audible alert signal also serves as the primary means for notification of campgrounds, state parks and other public recreation areas. If during a security-based incident, the Incident Commander in discussion with and agreement from the SEOC, feels that the sounding of the sirens would compromise the law enforcement actions, then a back-up system may be utilized. The decision must be mutually agreed upon and discussed thoroughly with the decision-makers from the other states involved.

DRED is responsible for alerting individuals located in state recreational facilities. Personnel from Fish & Game will be responsible for alerting people in other remote recreational areas, including boaters on the Connecticut River. The FAA is responsible for notifying aircraft in the affected air space. The safety of these responders should always be considered paramount and if there is a risk to their safety (during a HAB incident), other methods for alerting should be discussed.

Persons at special facilities, such as summer camps and public buildings will be alerted by the local officials. Public and private school principals will be alerted by their jurisdictional EOCs. School principals will, in turn, notify the remainder of the school population.

Local officials maintain a list with special/functional needs individuals (self-identifying) that may need assistance during an emergency. Individuals that could not otherwise be notified, will be contacted by local emergency workers.

A. Seabrook Station

High-powered sirens are the primary means of providing information to the residents and transient population within the SS EPZ and complimented by the Emergency Telephone Notification System. The system is comprised of 94 individual sirens. All these sirens have the capability to be operated either in a siren mode or a public address mode. Siren locations are provided by HSEM and the plant.

With the emergency management alert signal, the siren system will provide tone levels of at least 60dBC in virtually every inhabited area in the NH SS EPZ and at least 70dBC in nearly all of the more densely populated areas. A coverage level of at least 50 dBC will be provided everywhere in the NH SS EPZ. Most areas receive coverage by two or more sirens. Overlapping sirens ensure adequate alert coverage in the event of a random isolated siren failure. A reverse-911 telephone alerting system will provide redundancy to the alerting/notification system. All systems are able to be activated from Seabrook Station, RCDC, N.H State Police Communications orHSEM and will be activated simultaneously. A backup ANS for SS EPZ consists of an outbound telephone notification system utilizing the Code Red Emergency Communication Network. This will utilize existing published landlines from the SS EPZ communities. Code Red will also be supplemented by self-subscribers. Projected households reached in the entire SS EPZ in 65,421.

Although the Public Alert and Notification System (PANS) provides coverage to essentially 100% of the population within the NH portion of the SS EPZ, alternate means of alerting will be provided to boaters in off-shore waters within 10 miles of the plant. The USCG is primarily responsible for alerting offshore boaters beyond the areas covered by the sirens. Personnel and equipment from Marine Patrol are available to supplement activities near the shore and in the harbors.

B. Vermont Yankee

The alert notification system for the Vermont Yankee EPZ consists of sirens which Massachusetts has primary responsibility for activating with secondary responsibility to SWNHDFMA. Automated telephone dial-up system is activated by SWNHDFMA under the direction of HSEM. NOAA Weather (Tone Alert) radio activation is the responsibility of Vermont Emergency Management. All of these systems are activated with the coordination of all three states.

IV. Public Dissemination of Information

After initial public alerting has been accomplished through the sounding of the Emergency Management Alert Signal over the siren system and the Emergency Alert System (EAS), all official information and instructional messages will be broadcast to the public through the Emergency Public Information broadcast outlet. Both EPZ have a "State Relay Station" which is continuously monitored by other stations and will immediately re-broadcast all EAS messages received from the State Relay Station. **(See Participating Broadcast Stations, Figure 5.3)**

The EAS is used in accordance with the *NH Emergency Alert System Plan*. The system is designed to provide a timely and reliable means of notifying the public and disseminating information on emergency public information broadcast outlets (AM or FM) should an emergency occur. (See ESF#2 – Communications and Alerting in SEOP). In addition to the "live message" capability of the system, emergency messages have been pre-developed and recorded. This capability allows the EAS to be promptly activated. The State Primary Warning Point in Concord can activate this capability on a 24-hour basis.

Commercial telephone, e-mail or other computerized methods, social media and fax capability also exist as secondary means of communication. All information containing a security-related incident must be approved by the Unified Command at the ICP as well as the SEOC.

A. Emergency Alert and Public Information Messages

The EAS is a Public Notification System, which provides for prompt notification of an emergency. Concise messages regarding recommended protective action and a reference to a broadcast outlet for detailed Emergency Public Information (EPI) are included in each EAS message. The stations listed participate in the "Local Emergency Alert System Operational Area Plan."

EPI broadcasts include detailed information on recommended protective actions, how to implement them and how to get assistance during an emergency. EPI messages are generated by the incident PIO (or designee) using the HSEM WEBS computer program. (Refer to WEBS for sample messages). Messages are broadcasted at least once per hour and more often if felt necessary by the PIO in consult with ESF#2 and the Director.

Public information that contains any information relating to security, law enforcement activities tactics, terrorist or other security threats/actions, criminal investigation, injuries or victims must be cleared through law enforcement personnel. It is critical, however, that the addition of the law enforcement element to the emergency response NOT delay the issuance of critical information to the public on radiological releases and protective actions.

Participating Broadcast Stations Figure 5-3

VERMONT YANKEE PARTICIPATING STATIONS

FM Broadcast Stations

Station Call Sign	Location	Frequency	Designation
WKNE [1,2]	**Keene, NH**	**103.7 FM**	**State Relay**
WKNH	Keene, NH	91.3 FM	Participating National
WYRY	Winchester, NH	104.9 FM	Participating National
WINQ	Winchester, NH	98.7 FM	Participating National
WTSA[1,2]	Brattleboro, VT	96.7 FM	VT Station
WKVT[1]	Brattleboro, VT	92.7 FM	VT Station
WHYN[2]	Springfield, MA	93.1 FM	MA Primary
WHAI[2]	Greenfield, MA	98.3 FM	MA Station
WPVQ	Turner Falls, MA	95.3 FM	MA Station

AM Broadcast Stations

WKBK[1,2]	Keene, NH	1290 AM	Local Primary
WZBK	Keene, NH	1220 AM	Participating National
WTSA[1,2]	Brattleboro, VT	1450 AM	VT Station
WKVT[1]	Brattleboro, VT	1490 AM	VT Station
WHYN[2]	Springfield, MA	560 AM	MA Station
WIZZ	Greenfield, MA	1520 AM	MA Station
WHMQ[2]	Greenfield, MA	1240 AM	MA Station

SEABROOK STATION PARTICIPATING STATIONS

WHEB Group

WHEB [1, 2]	Portsmouth, NH	100.3 FM	Participating National
WERZ [1, 2]	Exeter, NH	107.1 FM	Participating National
WQSO [1, 2]	Rochester, NH	96.7 FM	Participating National
WSKX [1, 2]	York, Maine	95.3 FM	Participating National
WMYF[1, 2]	Portsmouth, NH	1380 AM	Participating National
WGIN [1, 2]	Rochester, NH	930 AM	Participating National
WXEX [1]	Exeter, NH	1540 AM	Participating National

WOKQ Group

WOKQ [1, 2]	**Dover, NH**	**97.5 FM**	**State Relay**
WSHK [1, 2]	Kittery, Me.	105.3 FM	Participating National
WSAK [1, 2]	Hampton, NH	102.1 FM	Participating National

WTSN Group

WTSN [1]	Dover, NH	1270 AM	Participating National
WBYY [2]	Somersworth, NH	98.7 FM	Participating National

Others

WUNH [1]	Durham, NH	91.3 FM	Participating National
WCCM (Spanish)	Salem, NH	1110 AM	Participating National
WENH – TV* [1]	Durham, NH	Channel 11	Participating National
WMUR - TV [1, 2]	Manchester, NH	Channel 9	State Relay

[1] Emergency Power [2] 24 Hour Coverage (contact Station Manager) * Programmed out of WGBH TV in Boston

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Chapter 6 - EMERGENCY COMMUNICATIONS

I. General

This Chapter describes the various communications systems that can be used during a radiological emergency.

II. Warning Points

NH Department of Safety, Division of State Police, Headquarters Communications operates a 24-hour emergency communications center at the State Incident Operations and Planning Center (IPOC) identified as the "State Primary Warning Point". It serves as the entry way into the notification and activation of the NH ORO.

The State Primary Warning Point is equipped with multiple communication radio and data networks composed of federal, State, plant and local emergency management systems.

III. Communications Systems

A variety of communications equipment and methods will be utilized by the NH ORO during an emergency incident and will ensure redundancy. ESF#2 – Communications and Alerting has the primary responsibility for Emergency Communications (See ESF#2 – Communications and Alerting, SEOP). The communication equipment installed in or utilized is shown in Figure 6-1, Communications Equipment at Emergency Facilities

A. Nuclear Alert System (NAS)

The utilities have established a microwave telephone network for use during an emergency. This network links the State Police Communications Center, the emergency management agencies, the near-site facilities, the plant's control room, and the Emergency Operations Facilities (EOFs) in the affected states. The system uses microwave channels (both owned and shared) linking Wescom SS-4 equipment. This self-powered, dedicated communications link serves as the primary notification mechanism. The system is also available for interstate administrative exchange of information. This NAS telephone equipment clearly identifies the telephones connected by this microwave system. An NAS back-up system utilizing Nextel is in place if the primary circuit should fail.

B. Emergency Management Radio Network

HSEM maintains a radio network which links each local EOC to the SEOC and the IFO, if activated. In addition, the system allows local EOCs to communicate with each other within the respective EPZs. This non-secure network utilizes a system of repeaters, which are located near each EPZ. Each repeater has back-up electrical power and is controlled by dedicated microwave channels and/or UHF linking channels.

C. Communication Information Support Vehicle (CISV)

HSEM maintains a CISV that, when deployed, will provide a mobile communications platform that augments an existing system or it may replace a failed system. The CISV will utilize several communication systems such as HF Radio, UHF/VHF Radio, Astro Radio, High bandwidth microwave and commercial telephones to ensure continued operation and communications performance. Back-up items on board include; GPS, satellite communications, cell phones and Nextel communications.

D. Radio Gateway Communications System

The Radio Gateway Communications System contained in the CISV will be deployed in support of state and local authorities. It will supplement existing communications and provide a unified communications network Cross Band Repeater Technology. The Radio Gateway will provide the Incident Commander at the incident site, long distance, highly reliable communications utilizing HF/VHF/UHF/satellite and commercial telephone systems. This system can be deployed as needed to supplement existing communications networks during an emergency.

E. HSEM Emergency Management Database Software/Internet

HSEM utilizes emergency management database software to record incident activities and provide communication and situational awareness with partners having internet access. This is a non-secure system but does allow for "permissions" to be granted for particular boards to certain groups of positions.

F. State Police Radio Network

The NH State Police radio network uses public safety frequency spectrums and remotely-controlled mountain-top repeaters/transmitters to maintain a communications link with selected state agencies, the Governor, and state police organizations of other states. This system is used as a non-secure communications link with secure capabilities. A P25 VHF high-band frequency spectrum is used to communicate with NH State Troopers, municipalities and other state agencies.

G. Police Portable Radio

These radios are used by State Police, local police departments and selected state agencies. Portable radios, owned by local police organizations, contain State Police high-band frequencies along with channels used by the local dispatch center.

H. State Police Mobile Radio

These are vehicular-mounted versions of State Police portable radios.

I. National Warning System (NAWAS)

The National Warning System, or NAWAS, is a dedicated nationwide early warning system established by the U.S. Department of Defense. It is used to broadcast information to each of the 50 states, U.S. territories and possessions, and selected military and governmental locations. NAWAS, which uses landlines as well as microwave channels, has back-up electrical power. It enters New Hampshire through HSEM and the State Police Communications Center. In NH, a state network, which is separate from the national circuit, connects with 18 state warning points as well as with SWNHDFMA and RCDC.

J. Commercial Telephone

This is the standard commercial telephone equipment offered to the public. It will be used for many of the communications requirements during an emergency. The commercial telephone system is the primary communications link and the radio system serves as back-up.

K. Commercial Pagers

Many state agencies use standard commercial paging services for notification of agency personnel. These services are accessible via commercial telephone and internet. SMS text messaging via cell phone also augments the notification process.

L. Amateur Radio

The Radio Amateur Civil Emergency Service and Amateur Radio Emergency Service (ARES) are viable ancillary communications networks between local and State organizations. During an emergency, a pool of RACES and ARES volunteers may be utilized by the HSEM, Risk or Host communities. They utilize privately-owned amateur radio equipment to provide state-wide and nationwide back up communications. HSEM has amateur radio equipment located at the SEOC to implement this network, as needed. The HSEM Communications Center and local EOCs maintain the capability to communicate with amateur radio operations.

M. FEMA National Radio System (FNARS)

This is a dedicated, high-frequency radio network linking FEMA Regional Offices and each of the states' emergency management organizations. FNARS provides a multitude of capabilities between these organizations.

N. Civilian Support Team 12 (CST)

Upon request, the NH National Guard CST#12 may be activated to help supplement communications, as needed.

O. Local Dispatch Radio Network

This is a network used by emergency personnel to communicate with the local dispatch center. It uses separate frequencies for police and fire communications. This network may also dispatch other municipal services such as highway departments and ambulance services.

P. Telephone Facsimile System (FAX)

This system consists of a number of high-speed facsimile machines located in key places. In general, it permits the transmission and reception of hard copy data and material over commercial telephone lines using dedicated telephone numbers.

Q. INform

This system consists of an electronic transfer of information directly from plant technical authorities at Vermont Yankee (EOF) to the N.H. State Warning Point, the State EOC decision-makers, and State Communications (ESF#2). A printed document appears on the computer screen relaying plant status information. This becomes the primary method for status information relay with NAS phone being utilized as backup.

Communications Equipment at Emergency Facilities **Figure 6-1**

	State EOC	Incident Field Office	SP Comm. Ctr	Reception Ctrs.	DPHS Lab	EOF	Media Center	Local Dispatch	SS Control	VY Control	Vermont EOC	Mass. EOC	RRCC Maynard	FEMA Reg. I	S Police Troops	STSA	Incident Command Post
NAS	X	X	X2			X		X	X	X	X	X			X3		
EM Radio Low Band	X	X			X	X		X			X	X				X	
EM Radio High Band	X	X				X					X	X	X				
NAWAS	X		X					X			X	X	X	X	X1		
State Police High Band ASTRO	X	X	X					X							X		X
State Police Radio Port. HB	X		X					X							X		X
State Police Mobile HB	X		X												X		X
Local Dispatch (Police)	X	X	X	X				X							X	X	X
Local Dispatch (Fire)	X	X		X				X								X	X
Commercial Telephone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Amateur Radio	X	X						X			X	X	X				
FNARS	X										X	X	X				
Fax	X	X	X			X	X	X			X	X	X	X	X	X	
Pagers	X	X						X									
Internet	X	X		X	X			X			X	X	X	X			X
INform	X		X			X					X	X					

1 = Troop A 2 = NH & Vermont 3= MASP Troop B/Northampton

IV. Communications Usage

A. Initial Notification

Initial notification requires communications among HSEM, the affected facility, NH State Police Communications Center, DHHS/Division of Public Health Services/Bureau of Radiological Health (RadHealth), the Governor, FEMA, SWNHDFMA for VY, or RCDC for SS, and the State's ERO agencies. The communications links required for Initial Notification are shown in **Figure 6-2, Emergency Notification Communications Links**. Each Link is identified by a letter. Descriptions for each link are as follows:

Link A:

Function Supported:	Facility notification to offsite organizations
Communication Between:	Facility's control room (Plant Emergency Director) and State Police Communications Center Dispatcher and/or Supervisor
Primary Equipment:	NAS
Back-up Equipment:	Commercial telephone/cell phone, direct connect
Coverage:	24-hour

Comments: State Police Communications Center Shift Supervisor will receive the notification from the dispatcher and will subsequently confirm the affected plant's message.

Link B:

Function Supported: State Police notification of DPHS

Communication Between: State Police Communications Center Dispatcher/Supervisor and DPHS representative on duty

Primary Equipment: Commercial telephone/cell phone

Back-up Equipment: State Police access to DPHS commercial paging service

Coverage: Business Hours - commercial telephone. Off-hours - commercial telephone and commercial pagers (24-hours)

Comments: None

Link C:

Function Supported: State Police notification of HSEM

Communication Between: State Police Communications Center Dispatcher/Supervisor and the HSEM Director/Duty Officer

Primary Equipment: Commercial telephone/pager/cell phone

Back-up Equipment: NAS, NAWAS (Business Hours)/cell phone

Coverage: Commercial telephone and commercial pagers (24-Hours)

Comments: Pagers and cell phones are carried by the HSEM staff and can be activated collectively or for any single person. During business hours no less than 5 back-up communications systems can be used. CISV can be used as a backup.

Link D:

Function Supported: Notification of local dispatch centers

Communication Between: State Police Communications Center Dispatcher and local dispatch center's dispatcher

Primary Equipment: Commercial telephone/State Police Online Telecommunications System (SPOTS)

Back-up Equipment: NAWAS/State Circuit, State Police radio/Dispatch Ctrs.

Coverage: 24-hour

Comments: None

Link E:

Function Supported:	DPHS verification of plant status
Communication Between:	DPHS official on duty and Plant Emergency Director
Primary Equipment:	Commercial telephone/cell phone
Back-up Equipment:	Through NAS in State EOC or State Police Communications Center
Coverage:	24-hour
Comments:	None

Link F:

Function Supported:	DPHS verification report to HSEM
Communication Between:	DPHS representative on duty and the HSEM Director or Duty Officer
Primary Equipment:	Commercial telephone/cell phone
Back-up Equipment:	Relay through State Police Radio System or the HSEM Radio System via DPHS Labs
Coverage:	24-hour
Comments:	None

Link G:

Function Supported:	Notification of Governor
Communication Between:	The HSEM Director (or Duty Officer) and Governor's representative
Primary Equipment:	Commercial telephone and commercial pagers/cell phone
Back-up Equipment:	Commercial telephone, commercial pagers and State Police radio system/satellite phone
Coverage:	24-hour
Comments:	If the governor is out of the state, the Governor can be reached but, in all likelihood, the next in line of succession (President of Senate) will act as governor pending the Governor's return. This individual can be contacted through State Police Communications Center.

Link H:

Function Supported: Notification of State Emergency Response Organization support agencies

Communication Between: The HSEM Agency Liaison Officer and on-duty representative of each agency

Primary Equipment: Commercial telephone/cell phone

Back-up Equipment: Commercial pagers/internet

Coverage: 24-hour

Comments: Radio systems are available for NH National Guard, State Police, Departments of Fish and Game and Transportation, DRED , Civil Air Patrol, ARES and RACES

Link I:

Function Supported: Notification of local emergency response organizations

Communication Between: Local dispatch center dispatcher and local government representative

Primary Equipment: Local dispatch radio/internet/cell phone

Back-up Equipment: Commercial telephone/cell phone and police/fire radio, pagers

Coverage: 24-hour

Comments: For more details see local plans

Link J:

Function Supported: Notification of FEMA by HSEM

Communications Between: The HSEM EOC Operations Controller and FEMA Region I MERS at the Regional Response and Coordination Center (RRCC)

Primary Equipment: Commercial telephone/cell phone/internet

Back-up Equipment: NAWAS, FNARS

Coverage: 24-hour

Comments: None

Link K:

Function Supported: Notification of EAS Broadcast Station

Communications Between: The HSEM Communications Officer or State Police Communications Center Dispatcher/Supervisor and WOKQ or WKNE Operators

Primary Equipment:	Telephone /FAX machine/internet
Backup Equipment:	Commercial telephone/cell phone, internet
Coverage:	24-hour
Comments:	None

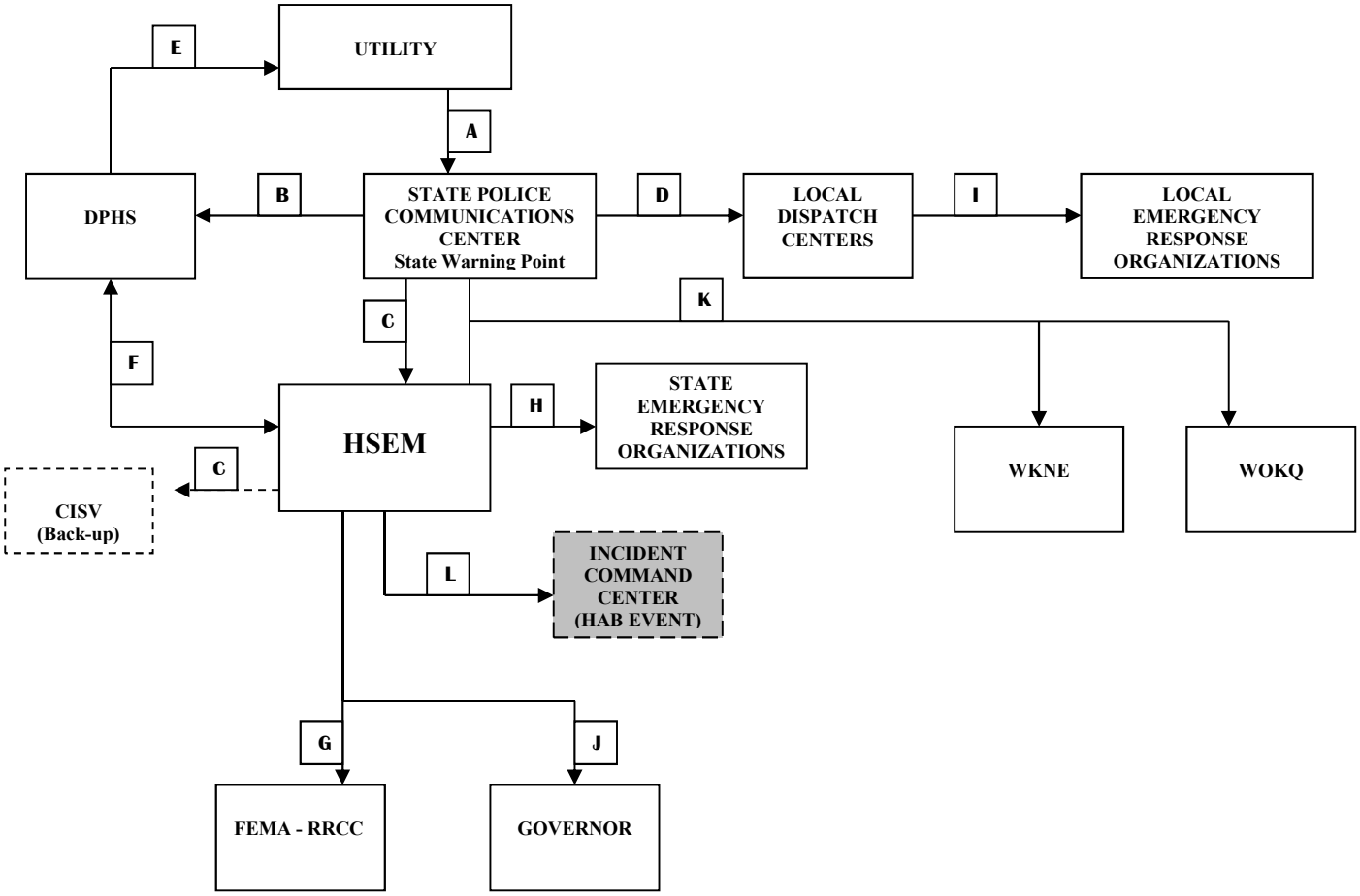
Link L:

Function Supported;	Notification to/from ICP

Communications Between: The State Emergency Operations Center and the Incident Command Post.

Primary Equipment:	Commercial telephone/cell phone
Backup Equipment:	Public Safety Radio/internet
Coverage:	24 hrs. (during event)
Comments:	For more information refer to "State Tactical Interoperable Communications Plan."

Emergency Notification Communications Links Diagram **Figure 6-2**



B. Among Emergency Response Facilities

During an emergency, each of the emergency response facilities must be able to communicate with each other. The communication between any two of these facilities is shown in Figure 6-3, New Hampshire Intrastate Emergency Communications.

Included are the primary and back-up capabilities. A Communications Plan for the event should be established and documented using ICS Form 205. In addition, the database management software available via the Internet can provide communication to all partners and organizations with Internet capabilities and via text on cellphones.

C. With Field Personnel

The field units involved in an emergency response will communicate with representatives located in the SEOC, EOF, IFO (if activated) and any ICP or Staging Areas established. Of special importance is communications with RadHealth Field Monitoring Teams. Each of these teams is equipped with an Emergency Management System radio that will provide communications between the teams and the RadHealth Lab and, if activated, the IFO. It is through this link that the RadHealth representative will coordinate the monitoring activities and gather early results for VY. In addition, the Field Monitoring Teams dispatched from the EOF used for SS will have radios operating on the plant's field monitoring frequency. Cell phones and lap tops may be utilized for back-up. During HAB events, close communication should occur between the MTC and the ICP to ensure routes and monitoring sites are safe and do not compromise law enforcement activities.

D. With Other States

Emergency response functions at VY require substantial coordination of the emergency response organizations in New Hampshire, Vermont and Massachusetts. Emergency response functions at SS require coordination between New Hampshire and Massachusetts. New Hampshire must also coordinate Ingestion Exposure Pathway/Post Plume EPZ response functions at SS with the State of Maine EM. In addition, there are mutual aid provisions among all the New England states, which require coordination and communication. Also refer to ICS Form 205 for each event.

E. With the Federal Government

The primary communications link with federal agencies will be through FEMA. The NAWAS also connects the State EOC to the Region I offices of FEMA located in Boston, MA, as well as the Regional Response and Coordination Center (RRCC) in Maynard, MA. Communications with FEMA will be through the Mobile Emergency Response System (MERS) at the RRCC in Maynard, MA. Direct communications between DPHS and the Department of Energy (DOE) or Environmental Protection Agency (EPA) will be from the State EOC using commercial telephone. Cell phones may be utilized as back-up. Also refer to ICS Form 205 for each event. Calls from the Agency Liaison, ESF#2 or Lead Agencies may be made directly to some federal agencies such as U.S. Coast Guard, Portsmouth Naval Shipyard, etc.

V. Fixed and Mobile Medical Communications

NH Emergency Medical Services support a communications system to facilitate communications between the Regional Coordination Centers (RCC) at SWNHDFMA and RCDC and ambulances from outside the respective Plume Exposure Pathway EPZs. Ambulances can communicate using one of the existing channels. All Rockingham County ambulances that may be called to the VY Plume Exposure Pathway EPZ can communicate with SWNHDFMA on the police radio system, and/or the Hospital Emergency Action Radio (HEAR866-444-4211 channel). Alternatively, Cheshire County ambulances normally operate on 155.220 MHz. A uniform, state-wide, four-channel emergency medical communication system has been installed in both the VY and SS Plume Exposure Pathway EPZs.

All fixed and mobile emergency medical services radios have a common radio frequency (155.175 MHz). Each medical RCC is equipped with a four-channel base station, which includes this common frequency, two hospital-to-ambulance frequencies, and a hospital-to-hospital frequency. In the VY Plume Exposure Pathway EPZ, SWNHDFMA is designated as the RCC and will dispatch ambulances including those from outside the area. For the SS Plume Exposure Pathway EPZ, the RCC will be RCDC. It will coordinate the dispatch of emergency medical mobile units from inside and outside the area.

The four-channel emergency medical radio system also provides for communications between fixed hospital facilities and between hospitals and mobile units. One channel is HEAR (155.340 MHz), which allows ambulance-to-hospital communications and is used by emergency rooms to prepare for incoming patients. A second channel

(155.385 MHz) also provides for ambulance-to-hospital communications. A third channel provides hospital-to-hospital communications, and a fourth channel is the common ambulance channel discussed above. All mobile medical and hospital facilities operating in New Hampshire are included in this emergency medical communications system.

VI. Testing

All of the emergency communications equipment discussed in this section is used by various agencies on a day-to-day basis. For this reason, many of the systems are in constant use or are tested frequently. The ESF#2 Communications Lead will maintain a permanent record of all communications systems tests. In addition, emergency communications systems are tested for use in a radiological emergency response during scheduled exercises. Sufficient equipment exists to cover for equipment removed for service or repair. While this section only discusses the primary and secondary equipment, many of the communications links have multiple back-up systems.

Testing of communication systems will be conducted on a regularly scheduled basis.

New Hampshire Intrastate Emergency Communications Chart Figure 6-3

To / From	State EOC	IFO	State Police Comm. Center	Reception Centers	Decon Centers	DPHS Labs	EOF	Media Center
State EOC		P - Tel B - EM Radio F - EOC Ops Off T - IFO Coordinator	P - Tel B - NAS B - NAWAS B - SPHB Radio	P - Tel B - via Host EOC	P - Tel B - via Host EOC	P - Tel B - EM Radio F - DPHS Rep T - Lab Tech	P - NAS B - Tel	P - Tel B - via IFO F - Media Rep T - Comm Off
IFO	P - Tel B - EM Radio F - IFO Coordinator T - EOC Ops Off		P - Tel B - NAS B - SPHB Radio	P - Tel B - via Host EOC	P - Tel B - via Host EOC	P - Tel B - EM Radio	P - Tel (VY) P - Face to Face (SS)	P - Tel B - Runner (SS) B - via EOF (VY)
State Police Comm. Center	P - Tel B - NAS B - NAWAS B - SPHB Radio F - Comm Supv T - EOC Ops Off	P - Tel B - NAS B - SPHB Radio		NCA	NCA	NCA	P - Tel B - NAS B - SPHB Radio	NCA
Reception Centers	P - Tel B - via Host EOC	P - Tel B - via Host EOC	NCA		P - Tel B - Radio	NCA	NCA	NCA
Decon Centers	P - Tel B - via Host EOC	P - Tel B - via Host EOC	NCA	P - Tel B - Radio		NCA	NCA	NCA
DPHS Labs	P - Tel B - EM Radio F - Lab Tech T - DPHS Rep	P - Tel B - EM Radio	NCA	NCA	NCA		P - Tel B - EM Radio via IFO	NCA
EOF	P - NAS B - Tel	P - NAS B - Tel (VY) B - Face to Face (SS)	P - NAS B - Tel B - SPHB Radio	NCA	NCA	P - Tel B - EM Radio via IFO		P - Tel B - via EOC
Media Center	P - Tel B - via IFO F - Media Rep T - Comm Off	P - Tel B - Runner (SS) B - via EOF (VY)	NCA	NCA	NCA	NCA	P - Tel B - via EOC	
Local Dispatch	P - Tel B - EM Radio F - Dispatcher T - Comm Off	P - Intercom (VY) P - Tel (SS) B - NAS B - EM Radio	P - Tel B - NAS B - NAWAS B - SPHB Radio	NCA	NCA	NCA	NCA	NCA
Local EOCs	P - Tel B - EM Radio F - EM Dir T - EOC Ops Off	P - EM Radio B - Tel T - Comm Off	NCA	P - Radio B - Tel	P - Radio B - Tel	NCA	NCA	NCA

P - Primary B - Backup F - From T - To NAWAS - National Alert and Warning Activation System NAS - Nuclear Alert System SPHB - State Police High Band Radio PD/FD - Police/Fire Department Radio NCA - No Communica

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Chapter 7 – PUBLIC INFORMATION AND EDUCATION

I. General

This Chapter provides guidance for informing the public and the media of emergency plans and actions that will be recommended should an emergency occur at a nuclear power plant.

II. Public Information Program

A. General Public:

The NH Public Information Program is composed of several elements that are designed to deliver emergency information to all segments of the public, and the media, that may be involved in an emergency situation. (See SEOP, ESF #15 Public Affairs Annex). The Public Information Support staff is available on a 24-hour basis to assure accurate information is provided in the most timely and expedient fashion possible.

The licensee, State and impacted communities coordinate and work to assure information and materials are disseminated appropriately. Public education materials are reviewed, revised (as needed) and disseminated annually to businesses and residents within the 10-mile EPZs of each nuclear power plant in the State. Special brochures, made available through NH Dept. of Agriculture, are provided for farmers, food distributors and food processors especially for use in the ingestion pathway areas. Public notices and/or posters are offered to local governments, large employers, Chambers of Commerce, restaurants, hotels, motels, and other recreational facilities and include emergency notification information, brief descriptions of protective actions, reception centers (for evacuees and their pets and/or service animals), and evacuation routes. They are also posted in parks, beaches and other outdoor recreational facilities that are under the control of the State and/or local government within the 10-mile EPZ and meant to inform the transient population of appropriate actions to take when they hear an emergency alert signal.

Each of the nuclear power plants produces a site-specific public information calendar annually that is mailed by the licensee to all residences within the EPZ. These calendars provide, at a minimum, the following information:

- Explanation of radiological concepts, including radiation and exposure effects and the four levels of emergency classifications.
- Identification of agencies/organizations responsible for emergency response for the Plume Exposure Pathway EPZ.
- Types of alerting used.
- Safety features at a nuclear power plant.
- Shelter-in-place information.
- Opportunity to sign up for mobile/landline telephone alerts in the event of an emergency at SS or VY. RENTS is the system utilized for VY and Code Red is the system utilized for SS.
- Information on pets and service animal protection.
- Procedures for school children.
- Information on use of potassium iodide (KI).
- Evacuation routes/reception center locations, including bus routes.
- Provisions for special assistance for special/functional needs individuals including those who are mobility-impaired.
- Description of planning exercises used to test emergency plans.
- Additional contacts for information (including telephone numbers and website addresses)

Permanent sign displays have been set up at parks, beaches, and other outdoor recreation areas in prominent locations. Included on them is information on siren alerting tones and identification of EAS stations which will be broadcasting further emergency information.

Although back-up means of alert and notification may differ from facility to facility, all backup messages will include information confirming that an emergency exists and instructions on where to obtain additional information.

B. Specialized Information

HSEM coordinates an annual access/functional needs survey by mail. These questionnaires (survey card) are used to identify residents who require special arrangements, notifications and/or transportation. A special section in the emergency public information flyer is devoted to information for special and/or functional needs including those with "mobility impairment." This information is distributed throughout the Plume Exposure EPZ. As they are returned to HSEM, they are passed on to the local EMDs to add to their own list of individuals from their towns requiring special assistance in "all hazards" planning. It will be the responsibility of the EMD to contact the individuals to ascertain their access/functional needs and keep their town specific lists current and private (in accordance with HIPPA requirements).

The emergency public information and access/functional needs survey cards are distributed by the utilities to individuals and households in the respective EPZs. In coordination with HSEM, VY also distributes the fliers and posters to special facilities, state parks and local governments. Local governments, in turn, distribute them to public buildings and school organizations.

C. Public Inquiry

A special telephone line for public inquiries has been established by the facility for use by NH residents in the VY EPZ. For SS, the plant has established a telephone number for site specific information. The plant status recorded messages on this system are updated throughout the emergency period and contain information about conditions at the plant site. These numbers are displayed/publicized on information and brochures, websites and emergency worker badges.

HSEM, in conjunction with Dept. of Safety, Division of Emergency Services, Bureau of Emergency Communications (E-911), maintains public inquiry (rumor control) numbers for VY and SS respectively. They are directed by and receive information through the State PIO. These lines have TDD capabilities. Public inquiry and media relations activities will include correcting misinformation at its source (if source can be identified) and utilizing information received from the calls for stylizing the messaging of news releases and briefings. The staff for media relations and public inquiry will provide accurate information to callers about NH's recommended protective action decisions and emergency operations. In addition, HSEM will use the Emergency Public Information (EPI) broadcast outlets and the JIC to convey information and instructions to the public about the offsite emergency response.

III. Media

A. Joint Information Center

A Joint Information Center (JIC) is established and operated by the facility when an incident has occurred. The purpose is to provide a central location for media contact and is the only facility (excluding media releases from the SEOC/Governor's Office) from which detailed information about the emergency and response will be distributed and official spokespersons will interact with the media. The Governor's designated public information representative may be present at the JIC and will act as the official spokesperson for New Hampshire.

The JIC provides a venue for the timely exchange of information among the designated spokespersons from the power plant, federal and state agencies involved in the response. News releases, regardless of the source, will be reviewed with all spokespersons prior to release to the media. The JIC is the only location which will provide this level of support near the EPZ for the news media during the incident. The JIC for VY is located in Brattleboro, the JIC for SS is located at the IFO/EOF Building (108 Corporate Drive) in Portsmouth. The alternate JIC for VY is Landmark College in Putney, Vermont.

The JIC is the designated location for media inquiries; however, because the emergency response is being managed from the SEOC, it is likely that media interest will focus there also. New Hampshire will not distribute news releases or make official statements from the SEOC. In the case of HAB incident or other

situation where it may not be feasible for individuals to travel to the JIC a virtual JIC or alternate JIC may be established. Sensitive information (especially in HAB-related events) will be "scrubbed" generally at the SEOC with the State PIO.

Special Note for VY;

The JIC for Vermont Yankee is physically located within the EPZ (Brattleboro) in an "unhardened facility". Should the town of Brattleboro be requested to evacuate (by the State of Vermont), the N.H. PIO staff will call the PIO at the SEOC for instructions. The State of N.H. is ultimately responsible for its staff located in other areas/states. In most instances, the staff will be instructed to either:

a) Return to the Concord SEOC (or other site identified) – OR –
b) Follow the plant and other partner PIOs to the alternate facility at Landmark College.

Since the Alternate JIC is a plant facility, Vermont Yankee will be responsible for ensuring that all equipment and supplies necessary are provided and the facility is in a constant state of readiness. Should a release have occurred and there is a question as to whether or not PIO personnel are contaminated they should report to the Keene Reception Center if returning to Concord or to the Putney (Vt.) Fire Station if travelling to Landmark College (plume dependent) for monitoring/decontamination.

B. Media Relations

The licensee, in conjunction with HSEM, will provide news briefings for the media at least annually in advance of exercises. The briefings will contain the following information (written and verbal):

- Emergency plans, procedures and concept of operations
- The flow of information and role of media during an emergency
- Radiation concepts
- Emergency organizations involved and contact persons
- How distribution of news information will be handled during an emergency.

IV. Public Information Officers

Public Information Officers (PIO) are those persons authorized by their organizations to:

- Release news and background information to the media.
- Monitor events and summarize information for distribution to responding organizations and media.
- Coordinate and verify information with all participating organizations.
- Ensure timely notification to the public.
- Assist public information support spokespersons.
- Maintain records of news releases and public information.

Physical communication between public information officers and JICs will consist of all available electronic and telephonic communications including video-conferencing, cell phones and land-line, faxes, data management software, etc.

A. State Public Information Officer

Any release to the news media of information from any State agency will be coordinated through the Governor's Office or State PIO.

The State PIO will:

- Collect, edit and release information to the media.
- Establish contact with wire services, newspapers, radio, television and other electronic media.
- Assist news media personnel in the performance of their functions including: accreditation, identification, and obtaining interviews.
- Coordinate the release of information with the licensee and other state and local public information officers.
- Brief the news media as conditions warrant.
- Keep concerned staff informed through "in-house" news summaries.

- Establish a format for managing, staffing, collecting and analyzing information from the NH Public Inquiry Line, before, during, and after a disaster.
- Assign public information staff who will work at the licensee's JIC or the SEOC.
- Determine appropriate releases for social media dissemination.

B. Risk/Host Community Public Information Officer

Each host and risk community may provide a public information officer to represent them at the licensee's Joint Information Center or may choose to provide information to the State PIO for coordination.

C. Licensee Public Information Officer

The licensee will provide a public information officer in the licensee's Joint Information Center.

D. Federal Public Information Officer

Public Information Officers from the Nuclear Regulatory Commission (NRC), FEMA and/or other federal agencies may choose to participate in the Joint Information Center.

E. Incident Command Post Public Information Officer(s) – HAB Incident

The Incident Command Post Public Information Officers are responsible for developing and releasing information about the incident within the law enforcement and state parameters and with their direct approval. The Information Officer may have assistants as necessary and the assistants may also represent assisting agencies or jurisdictions.

Some of the responsibilities that may apply include:

- Identify limits on any information release and obtain appropriate approvals.
- Develop materials that may be used in media briefs.
- Assist in obtaining media information that may be useful to incident planning.
- Maintain information summaries on the incident and provide information on status to assigned personnel.
- Coordinate directly with the JIC and State Public Information Offices/personnel.

V. Response by Emergency Classification Level (ECL):

The dissemination of information to the news media and public will be coordinated by the public information officers from the State, affected communities and licensee. Each public information officer will collect information regarding emergency operations and recommended protective actions from their respective personnel in the emergency operation centers. The accuracy and validity of this information will be verified orally, by hard copy or electronic documentation. Upon verification of information, the public information officers will develop coordinated news releases. The HSEM Director, or their designee, the Governor's office (as appropriate) and DPHS are responsible for reviewing information and determining its validity and accuracy prior to the release of public information by the State. Sample media releases for each appropriate emergency class are provided in Attachment A – Implementing Procedures for State Agencies.

A. Notification of Unusual Event

Due to the nature of conditions at this emergency class, an informative release of information to the media or public regarding off-site emergency operations or protective actions may be released from the State and/or the plant. In most instances, local EOCs/EMDs within the EPZ will be notified by the State. State and local emergency response agencies will monitor conditions until the event escalates or terminates or report to the

SEOC, if directed. It will be at the discretion of the local EMD (or other designee) or the HSEM Director to activate appropriate emergency operations centers at this level.

B. Notification of Alert

Upon declaration of an Alert (at a minimum), the public information officers will be notified in accordance with agency procedures and placed, at a minimum, on standby status. Public information plans and implementing procedures will be reviewed by the public information officers and informational materials (press packets, emergency forms, etc.) will be made ready, should conditions escalate.

Each impacted community may activate rumor control centers and dispatch public information officers to the JIC, if appropriate. The licensee may dispatch public information officers and an Emergency Media Center manager to the JIC. The JIC is activated at an Alert. In cases where it is not feasible, or safe for representatives to travel to or from the JIC, a virtual JIC may be established with approval from the Director or designee.

C. Notification of Site Area Emergency and General Emergency

Upon escalation of conditions to a Site Area or General Emergency (at a minimum), the Public Information Staff will activate the State of New Hampshire Public Inquiry Line. The SEOC will serve as the primary source for information releases until activation of the licensee's Joint Information Center. Upon activation of the licensee's Emergency Media Center, the State PIO representative and support staff will be deployed. Should conditions warrant, these facilities may be activated prior to declaration of a Site Area or General Emergency. (See above regarding virtual JIC)

D. HAB Actions and Changes in Emergency Classification Level

Developments subsequent to the event which originally triggered the Initial Notification may require the emergency to be reclassified. Any change of the ECL, including termination of emergency status, requires the plant to promptly notify the State Warning Point or, if activated, the SEOC. The notification of change will be confirmed if not received via NAS.

If the SEOC has not been activated, notification of HSEM, RadHealth and local governments will proceed as previously described for initial notification.

In a security-related event the following actions may be taken earlier than would otherwise occur in accordance with the procedures.

- The State Emergency Operations Center may initiate a limited activation at UE to include Unified Command and PIO representative(s) at a minimum.
- If/when an Incident Command Post (ICP) is established, a public information representative will be sent from the SEOC to the ICP and the JIC (if feasible). A virtual or alternate JIC may have to be established as conditions warrant. Law enforcement and public relations personnel will be notified and requested, as appropriate..
- At Alert/SAE additional local, state and federal representatives may be requested by the Incident Commander/Unified Command.

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Chapter 8 - EMERGENCY FACILITIES AND EQUIPMENT

I. General

In order to effectively coordinate State, local, federal and licensee resources during an emergency at a nuclear power plant, it is preferable that emergency response facilities be established in the vicinity of the power plant. These should be close enough to each other and to the power plant to allow coordination of the response but should be outside the 10-mile Emergency Planning Zone. This chapter describes the emergency response facilities utilized for each of the power plants, identifies the supplies and equipment designated for emergency response, and, identifies the key personnel and organizations that are anticipated to respond to emergencies at each facility. All facilities are expected to be capable of 24-hour operations for an extended period of time and provide a timely activation and staffing in times of emergency.

II. Emergency Response Facilities

There are four types of facilities to support an emergency response at a nuclear power plant; plant-operated, state-operated, locally-operated and federally-operated. Six facilities, the State Emergency Operations Center (SEOC), Incident Field Offices (IFO), State Police Communications Center, State Transportation Staging Area (STSA) and the DPHS, RadHealth Laboratories are operated by the State of New Hampshire. Three facilities, the Emergency Operations Facility (EOF), the JIC, and the Control Room are plant-operated. A Joint Information Center (JIC) will be established as part of the plant/state EOF or virtually, if determined necessary. Each risk or host community operates a local EOC. Host communities operate the reception centers in their jurisdiction with support from the State. In addition, the municipalities are served by a local dispatch center located near their respective Plume Exposure Pathway Emergency Planning Zones (EPZ). **(See Figure 8-1)**

If the National Response Framework (NRF) is fully implemented, additional facilities will be established to include the Joint Field Office (JFO) and the Federal Radiological Monitoring and Assessment Center (FRMAC). If an event contains a hostile action or other law enforcement/ security component, other local, state and federal partners may be activated and an Incident Command Post (ICP) will be established generally with a Unified Command.

A. State Facilities:

1. State Emergency Operations Center (SEOC)

The State Emergency Operation Center is the central command center for offsite emergency response by the state and affected municipalities in the event of a radiological emergency resulting from an incident at either of the nuclear power plants affecting NH. (For a more detailed discussion of the State Emergency Operation Center, please refer to the SEOP). The SEOC is located at 110 Smokey Bear Blvd. in Concord, New Hampshire in the Incident Planning and Operations Center (IPOC). HSEM is responsible for the operation of this facility.

HSEM staff has been assigned to one of the four Sections (Operations, Planning, Finance/Administration, and Logistics), (see the SEOP). If the incident involves security or strong law enforcement implications, an Intelligence Section may also be activated. It is the responsibility of the Section and Branch chiefs to ensure that each response area is adequately staffed in accordance with established operating procedures. When it is anticipated that activation will occur for an extended period of time, the State Emergency Operations Center will run two (2), 13-hour shifts to allow for an overlap of one hour of staff out/in-briefings.

Generally, the SEOC is partially activated to support local emergency operations upon declaration of an Alert emergency classification, or at UE if determined prudent by the HSEM Director (or designee). Upon declaration of a Site Area Emergency or General Emergency the SEOC is fully activated to coordinate all operations undertaken by the State; however, full activation may take place at any time during a rapidly escalating situation or as other conditions warrant.

Upon declaration of an emergency at a nuclear power plant, representatives of the Federal Emergency Management Agency (FEMA) will be dispatched to the SEOC. NRC may also support State EOCs with representation.

2. Incident Field Office (IFO)

An IFO, if fully activated, supports coordination of local municipalities, state agencies, and others located in or adjacent to the EPZ.

Activity at an IFO may include state agency, host and EPZ community coordination and communications as well as functioning as a back-up facility for mobilizing state resources if a common location close to the EPZ should become necessary. The IFO may also compile, coordinate and transmit protective action recommendations from the EOF to the SEOC for concurrence and then out to the local communities, if requested or activated. Once concurrence is received, the IFO may then implement respective response and protective actions as necessary. In some instances, the State Local Liaisons may be located at the IFO.

3. NH State Police Communications/Dispatch Center

The State Police Communications/Dispatch Center is the central telecommunications, radio communications and notification point for the NH State Police. The headquarters Communications Center is linked to members of the State Police Command Staff, all State Police Troop Stations, the State Police Field Operations Bureau, and local law enforcement agencies via radio, telecommunication and telephone. There are also direct telephone link-ups to the State Hospital, and State Prison. The radio system is capable of dispatching on both low and high band frequencies and consists of primary and back-up consoles. This Communication Center functions as the State Warning Point and is directly linked via telephone to the control rooms of SS and VY. This center is operational 24 hours a day.

4. RadHealth Radio-Chemistry Laboratory

This facility consists of equipment and staff capable of performing radio-chemical analysis on particulate filters, soil, animal feed, liquid milk or food samples, water samples, etc. (Laboratory inventory available, upon request)

All laboratory analysis activities will be conducted under priorities assigned by DPHS assessment staff and will be coordinated by the DPHS Laboratory Supervisor. An adequate Emergency Preparedness program requires and includes an independent and on-going environmental radiological monitoring program that maintains a radiological baseline determined independently by the State. The scope of the ongoing environmental monitoring program will be determined by DPHS, based upon the plan and best radiological health, environmental monitoring and radio-analytical practices.

5. State Transportation Staging Areas (STSA)

The STSA serves as the first reporting and gathering place for state-coordinated transportation resources supporting the evacuation of EPZ residents, students and visitors. Activation is handled at the SEOC through a coordinated effort between the Operations Chief and ESF#1-Transportation. Request for activation will come through ESF#1 - Lead

For the EPZs, the staging area is the gathering places for buses, ambulances and personnel. Local transportation resources are more than adequate and some transportation resources are initially staged in each community. If local resources should fall short, resources from other areas can be called in to meet the needs. Each local EOC may also establish local transportation staging areas to assist in coordinating the transport needs of evacuees in its community.

6. Public Inquiry/Rumor Control

A toll-free 800 telephone number (with TDD capabilities) has been established at E-911 for answering public inquiries regarding emergencies at either power plant. Up to 5 telephone operators within the Public Safety Answer Point (PSAP) staff these lines. Any developing rumor trends are reported to the Media Center officials to be addressed in public information messaging.

B. Plant Facilities

1. Emergency Operations Facility (EOF)

The primary exchange of information between the onsite and offsite emergency response organizations occurs in the EOF. In an emergency at a nuclear power plant, representatives of the Nuclear Regulatory Commission (NRC) and the Department of Energy (DOE) will be located at the EOF.

Information concerning the reactor status, facility dose projections and monitoring data is transferred to RadHealth and HSEM personnel located in the EOF by the plant in accordance with the facility's emergency plan.

2. Control Room

The power plant Control Room is linked to offsite facilities. It is from the Control Room that notification of the ECLs is initiated and verified until the EOF is activated and technical data about the incident is provided to the plant and state representatives in the EOF.

3. Joint Information Center (JIC)

The Joint Information Center is the central coordination point from which information about the incident and the emergency response will be released to representatives of the media. In the JIC, public information officials of the facility, state and federal officials will coordinate their activities through the establishment of a JIC. Representatives located in the JIC have a direct dedicated link with the SEOC. Inquiries from the public will be provided primarily through the Public Inquiry Line. A virtual JIC may be established as needed or appropriate.

C. Local Government Facilities

1. Local Emergency Operations Centers

Each Risk and Host Community affected by a radiological emergency will establish a Local Emergency Operation Center to coordinate and provide command and control to the community's emergency response. Key local officials will report to the Local Emergency Operation Center at the time of an emergency. The local EOC will be in direct contact with the State ERO.

2. Local Dispatch Centers

The local dispatch centers are operated by Southwestern NH District Fire Mutual Aid (SWNHDFMA) for the VY EPZ and by the Rockingham County Sheriffs Department for the SS EPZ. These facilities provide police, fire, and emergency medical dispatching for the municipalities in their respective service areas (which are larger than the respective Plume Exposure Pathway EPZ areas). Emergency communications to the local government and coordination of emergency services within the EPZs are provided by these dispatch centers.

3. Reception Centers

Reception Centers are composite entities located outside of the 10-mile EPZ, directed by the local EOC, activated upon request of the State. They are operated by the host community to accommodate the emergency service needs of evacuees and their service animals as they leave the Plume Exposure Pathway EPZ. In a reception center, evacuees and service animals are registered and provided temporary services. These facilities will not be used to house evacuees for prolonged periods of time. In the event mass care services become necessary, they will be provided by ESF#6.established shelters. State agencies provide support to the host community response organization in the activities of reception centers. DPHS provides oversight of the decontamination process.

ESF#6, ESF#8 along with DPHS/RadHealth and HSEM will/may provide personnel to support local personnel for open reception centers. The ARC will send representatives to each reception center that has been activated to act as a liaison between the reception center and the shelters. In some instances, shelter functions may be carried out by other community groups or individuals. Functions of this facility include, but are not limited to:

- Registration
- Coordination of remote rendezvous (re-unification)
- Distribution of emergency clothing and supplies (through VOAD)
- Medical services referrals
- Congregate care referrals
- Monitoring and decontamination

DPHS/RadHealth is responsible for the oversight of the monitoring and decontamination activities at each center (usually carried out by host community personnel). This calls for the removal of radioactive material from individuals and/or equipment that may have become contaminated. If special treatment is required, individuals will be referred to facilities equipped to treat radiologically contaminated and/or exposed individuals.

The State of NH assists in the operation of one reception center in Keene for the VY EPZ, (state residents may also use the services of the reception centers in Greenfield, Ma. and Bellows Falls, Vt.) and four for the SS EPZ (Dover, Rochester and Manchester [2]). One or more of these may be activated by the local host EOCs during an emergency as necessary. An Incident Commander assigned by the host community will be in charge of the running of the facility.

4. Incident Command Post and Staging Areas (Security-Related Events)

If the Incident Commander determines an Incident Command Post is needed, the location of the ICP and staging areas will be determined by the first person arriving on scene. Some sites have been pre-determined. The Incident Commander can assign an alternate staging area if it is determined that the pre-determined sites are not suitable or have not been identified.

Staging Area(s) may be established to help support the incident by providing a site where tactical response resources may be stored while awaiting assignment. It will generally be located close enough to the incident for timely response but far enough away to be out of the immediate impact zone.

D. Federal Facilities

Assistance will be provided to federal agencies assisting the response in locating appropriate facilities for use. Effort will be made to ensure that they are geographically conducive to the incident response activities.

1. Joint Field Office (JFO)

This facility will be established by FEMA/NRC/DOE at a location identified in conjunction with the State of New Hampshire that serves as a focal point for federal response team interaction with the state(s). It may be co-located with or near the FRMAC.

2. Federal Radiological Monitoring and Assessment Center (FRMAC)

This activity may establish a facility from which the DOE Offsite Technical Director coordinates the federal radiological monitoring and assessment efforts.

III. Staffing Assignments for Emergency Response Facilities

Each state agency in the ERO is responsible for deploying personnel to one or more appropriate emergency response facilities. State Transportation Staging Area (STSA) personnel are notified by ESF#1 to activate their respective STSAs at the ALERT Level.

IV. Supplies and Equipment for the Emergency Response Facilities

Each emergency response facility has been equipped with materials necessary for its effective operation. These include status boards and large detailed maps of each Plume Exposure Pathway and Ingestion Exposure Pathway/Post Plume EPZ. Responsibility for the operational readiness of local response facilities is the local Emergency Management Director (EMD) or designee.

Equipment to be used in implementing an emergency response will be inspected, inventoried, and operationally checked. Emergency equipment/radiological instruments will be calibrated at least once each calendar year and after each use in compliance with established procedures and calibration and maintenance schedules. HSEM's RIMC Shop will carry out the maintenance and calibration schedules and maintain an accurate inventory for each location. Potassium Iodide (KI) will be inspected on a quarterly basis and any KI that has exceeded or will exceed the shelf life prior to the next scheduled inventory will be replaced. Dosimetry equipment for EPZ communities will be based upon needs identified in their local plans plus 10%. (See Inventory Checklists, Attachment B – Implementing Procedures for EPZ Communities)

Emergency Response Facilities Locations Table 8-1

Emergency Response Facility	Seabrook Station	Vermont Yankee
State Emergency Operations Center (SEOC)	Homeland Security & Emergency Mgt. Incident Planning & Operations Center 110 Smokey Bear Blvd. Concord, N.H.	Homeland Security & Emergency Mgt. Incident Planning & Operations Center 110 Smokey Bear Blvd. Concord, N.H.
Incident Field Office (IFO)	IFO Seabrook Station 108 Corporate Dr Portsmouth, N.H.	Keene Fire Station Vernon St. Keene, N.H.
State Police Communications Center	Incident Planning & Operations Center 110 Smokey Bear Blvd. Concord, N.H.	Incident Planning & Operations Center 110 Smokey Bear Blvd. Concord, N.H.
Division of Public Health/RadHealth Lab	29 Hazen Drive Concord, N.H.	29 Hazen Drive Concord, N.H
State Transportation Staging Area (STSA)	Rockingham County Court House 10 Rte. 125 Brentwood, N.H.	First Student Terminal Rte. 10 West Swanzey, N.H.
Reception Centers (Registration, Monitoring, Decontamination)	Dover Middle School 16 Daley Drive Dover, N.H. Memorial High School 1 Crusader Way Manchester, N.H. Southside Middle School 140 S. Jewett St. Manchester, N.H. Rochester Middle School 47 Brock St. Rochester, N.H.	Keene High School 43 Arch St. Keene, N.H. Greenfield Community College 1 College Drive Greenfield, Ma. Bellows Falls Union High School 8 ½ Atkinson St. Bellows Falls, Vt. NOTE: Greenfield and Bellows Falls run by Ma. and Vt. respectively
Emergency Operations Facility (EOF)	IFO Seabrook Station 108 Corporate Dr Portsmouth, N.H.	Vermont Yankee Training Center Old Ferry Rd. Brattleboro, Vt.
Media Center (JIC)	IFO Seabrook Station 108 Corporate Dr. Portsmouth, N.H.	VY Corporate Headquarters Old Ferry Rd. Brattleboro, Vt.
Control Room	Seabrook Station Nuclear Power Plant Seabrook, N.H.	Vermont Yankee Nuclear Power Plant Vernon, Vt.
Local EOCs	Brentwood Fire Station 419 Middle Rd East Kingston Fire/Police Station 3-5 Main St. Exeter Public Safety Complex 20 Court St. Greenland Fire Station 575 Portsmouth Ave. Hampton Fire Station #2 140 Winnacunnet Rd. Hampton Falls Public Safety Complex 3 Drinkwater Rd. Kensington Fire Station 124 Amesbury Rd. Kingston Central Fire Station 148 Main St. New Castle Fire Station 43 Main St. Newfields Fire Station 7 Piscassic Rd. Newton Central Fire Station 35 South Main St. North Hampton Fire/Police Station 235 Atlantic Ave. Portsmouth Central Fire Station #2 3010 Lafayette Rd. Rye Fire Station 555 Washington Rd. Seabrook Fire Station 87 Centennial Drive	Chesterfield Town Office Bldg. 492 Route 63 Hinsdale Town Hall 11 Main St. Richmond Civil Defense Bldg. 17 B Winchester Rd. Swanzey Police Station 34 Eaton Rd. Winchester Emergency Svs. Bldg. Fire Station, 6 Parker St.

HOST EOC	South Hampton Fire Station 128 Main Ave. Stratham Municipal Center 4 Winnicut Road Dover Fire Dept. 262 Sixth St. Manchester Central Fire Station 100 Merrimack St. Rochester Fire Station 37 Wakefield St.	Keene City Hall 3 Washington St.
Local Dispatch	Rockingham Cty. Sheriffs Dept. 101 North Rd. Brentwood, N.H.	Southwestern NH District Fire Mutual Aid Keene Fire Station 32 Vernon St. Keene, N.H.
Incident Command Post	Site established during event, as needed	Site established during event, as needed

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Chapter 9 - ACCIDENT ASSESSMENT

I. General

This Chapter describes responsibilities for assessing the offsite impact of a radiological emergency at a nuclear power plant and its effects on the health and well being of the residents and visitors of New Hampshire. The State's capability for making accident assessments and performing field monitoring are described and carried out according to the Department of Health and Human Services, Division of Public Health Services,Radiological Health Section's (RadHealth) Standard Operating Procedures.

II. Initial Assessment

The licensee will provide accident assessment and protective action recommendations (PARs) for the Plume Exposure Pathway Emergency Planning Zone (EPZ) based upon plant status and prognosis. Initial protective actions can thus be determined prior to a release of radioactive material and/or prior to the availability of radiological assessment data. The results of the assessment will be reported to State and local organizations in accordance with Chapter 5 (Notification and Alerting) of this Annex. These protective actions will be re-evaluated as radiological assessment data become available.

Initially, plant Control Room personnel will provide plant status to the RadHealth Response Initiator subsequent to initial notification of the declaration of an emergency by the plant. Ongoing plant status data will be made available to RadHealth Accident Assessment personnel from the plant's technical personnel located in the EOF. The facility's PARs will be provided to the EOF Radiological Health Technical Advisor (RHTA) along with the basis for such recommendations.

III. Field Monitoring

A. Plume Exposure Pathway EPZ

Field monitoring within the plume exposure pathway around nuclear power plant sites is directed and coordinated by health physicists from RadHealth. Laboratory support and equipment available for use by the field monitoring team are maintained by NH DPHS. The specific systems and methods for gross radioactivity measurement, location and tracking of the radioactive plume, radioiodine concentration in air measurement, estimating integrated dose from actual and projected dose rates are outlined in established DPHS/RadHealth operating procedures.

B. Activation/Implementation

RadHealth will mobilize a minimum of two, three-person field teams to monitor plume-edge radiation levels. Field monitoring is essential to verify the dispersion calculations and to determine the location and to characterize off-site plumes. Field Monitoring Teams (FMT) will be assembled, equipped, and dispatched from the RadHealth Laboratory facility in Concord. Teams are at a point of readiness for deployment in approximately 1 ½ hours after departure from Lab.

The Field Monitoring Teams are coordinated from the EOF at the ALERT Emergency Classification Level (ECL). Staging and deployment at this ECL provides for the possibility of obtaining baseline readings and/or pre-positioning at specific monitoring points prior to a release.

Each team will be equipped with a field monitoring kit, instruction package, and a radio equipped vehicle. A list of contents of the kits is contained in the *Monitoring/Sampling Team Procedures – DPHS Field Team Manuals* held at DPHS Hdqts. in Concord . The RadHealth Lab Supervisor will brief the teams and direct them to report to the monitoring team staging area where they will be dispatched by the Monitoring Team Coordinator. Once dispatched, the monitoring teams will proceed to pre-selected monitoring points for EPZs, as well as other designated sites. Utilizing

instrumentation, the teams will then proceed to detect plume edges. Monitoring teams will be instructed to not traverse the plume or to take centerline measurements, as this will be performed by plant monitoring. When a security-related incident involves the set up of an Incident Command Post, information relating the planned routes and locations of the FMTs will be cleared with the Incident Commander. If the Incident Commander (or Unified Command) determines that the routes are not safe, the information will be relayed back to the SEOC for forwarding to the Monitoring Team Coordinator.

Upon arrival at the monitoring sites, the team will measure the dose rate near the ground and at waist height using a portable ion chamber instrument. Portable air samplers will be used to take air samples using silver zeolite cartridge and particulate filters. (Charcoal filters will be used during drills). Following this collection, a count rate instrument will be used to determine airborne radioiodine at minimum detectable levels less that 10-7 u Ci/cc (microcuries per cubic centimeter), from the silver zeolite cartridges and airborne particulate levels from the particulate filters. The monitoring teams will report sample results to the Monitoring Team Coordinator via radio or other method and receive further instructions. RadHealth procedures provide additional information in the conduct of field monitoring.

Monitoring teams will handle air sample media for further analysis as directed by the Monitoring Team Coordinator (MTC). If necessary, aerial monitoring support will be provided by the FRMAC. Aircraft available through various state agencies may be used for transport of samples and other purposes through ESF#1 – Transportation.

Any liquid spills in the waters near the plant will be monitored by collecting water samples, as needed. Radioactively contaminated liquid spills may be monitored by collecting water samples, as needed.

An adequate emergency preparedness program includes an on-going environmental sampling program to provide for an environmental radiological baseline which can be used to independently determine appropriate protective actions. The scope of the ongoing environmental monitoring program will be determined by DPHS, based on the plan and the best radiological health, environmental monitoring and radio-analytical practices.

C. Coordination with Other State, Plant and Federal Radiological Officials

The plant will be utilizing its own field monitoring teams and laboratories to measure radiological contamination levels in the EPZ. This data will be passed along to RadHealth at or through the EOF and SEOC. State teams and facility teams will be dispatched jointly from the EOF.

Other states will also be conducting dispersion calculations, field monitoring and sampling for their portions of the Plume and Ingestion EPZs. RadHealth Accident Assessment staff should periodically exchange information and jointly review PARs with these radiological specialists.

During the course of an accident, NRC staff will be stationed at the EOF and SEOC. The observations and information obtained from these federal officials will be of value to RadHealth Accident Assessment staff and decision-makers. If, during the course of the accident, RadHealth needs to supplement its resources, two readily available resources are FRMAC and the New England Compact on Radiological Health Protection. The need for additional support will be determined by the SEOC RHTA and Accident Assessment Team and must be approved by the RadHealth Director at the SEOC in discussion with the SEOC Director. Need may be based on anticipated events and a possible accident sequence.

D. Meteorological Effect

The plant will provide local meteorological data from its meteorological equipment and supplemented by data from the appropriate National Weather Service (NWS/NOAA) Office.
Meteorological conditions determine the dispersion pattern of the plume of released radioactive material. The direction of the plume travel and the height and width of the plume must be determined to identify the locations that may be affected. The downwind speed of the leading edge of the plume is determined to project the time available to take protective actions. The duration of release and the prevailing meteorological conditions are used to determine how long the plume will take to pass over an area.

E. Estimating Current and Projected Doses for the Plume Exposure Pathway

Dose projections based on actual or projected radiological releases, form the basis for evaluating whether to expand the PARs based on plant conditions for the Plume Exposure Pathway EPZ. The levels of offsite radiation are projected in terms of Total Effective Dose Equivalent (TEDE) and thyroid Committed Dose Equivalent (CDE) in Rems. TEDE consists of the external exposure from airborne and deposited materials and the committed dose to internal organs from the inhalation of radioactive materials from the passing plume. The thyroid CDE, although part of the TEDE, may be the restricting organ dose depending on the mix of radioisotopes released. Different emergency conditions may release different amounts of radioactivity and different mixes of radionuclides. Radiation doses from direct radiation or the inhalation of radioactive material are expected to be of concern only for the area, which is within the 10-mile radius of the plant.

The plant will provide information on releases, including the time of release and the expected duration. Information about anticipated releases will also be provided. The source term, (which describes the concentration and type of radioisotopes which have been or potentially could be released and other characteristics), is also necessary to perform dispersion calculations.

Downwind concentrations will be estimated based upon the meteorological conditions and a description of the source terms (amount/type of release, etc.) provided by the plant. The initial projections will be based on an assumed mixture of radionuclides. The composition will be adjusted based on available effluent sample analysis or field measurements. The Accident Assessment Team will provide estimates of when the leading edge of the plume will arrive, the area covered by the plume and how long the plume will take to pass. TEDE and CDE projections may be made using the NH Public Health Assessment Program (PHAAP). PHAAP is a computer-based method for calculating projected dose and plume dispersion. RASCAL, METPAC, Raddose-V or other computer based methods for calculating projected doses and plume dispersion may be used. This activity is typically conducted at the SEOC or at the EOF.

F. Estimating Current and Projected Doses from Deposited Radioactive Materials

Dose projections form the basis for establishment of the Restricted Zone and the relocation of the general public within the Restricted Zone. Different emergencies may release different amounts of radioactivity and different types of radionuclides. The levels of individual radionuclides deposited by the plume must be determined in order to project the sum of the individual doses from each radionuclide.

The primary dose calculated is the sum of the effective gamma dose equivalent from external exposure and the committed effective dose equivalent from inhalation. Skin dose from exposure to beta radiation may be significant in some cases. The exposure periods of interest are the first, second and fifty years following the accident.

Calculation of the projected gamma dose from measurements requires knowledge of the principal radionuclides contributing to the exposure and their abundances. This information can be compiled by radionuclide analysis of environmental samples. Several measurement locations will be required to

determine whether there has been any selective deposition of radionuclides as a function of weather, surface type, or distance from the point of release.

Gamma exposure rates may decrease rapidly if short-lived radionuclides are present. Therefore, the relationship between instantaneous exposure rates and projected first year, second year and fifty year doses will change as a function of time. These relationships will be established for the particular mix of deposited radionuclides present at the time of the gamma exposure rate measurements. EPA 400 contains dose conversion factors for each of the time periods of interest which account for radioactive decay and weathering.

Even though gamma radiation from deposited radionuclides is expected to be the principal exposure pathway, other pathways will be evaluated and their contributions added, if significant. These other pathways include inhalation of re-suspended material and beta dose to the skin. Exposures received from the passing plume will not be considered when evaluating this pathway. Likewise, exposure from ingestion of food and water is considered independent from the evaluation of the need for relocation. There may be instances, however, when withdrawal of food and/or water from use may, in itself, create a hazard; relocation may be an appropriate protective action in this instance.

G. Estimating Current and Projected Doses for the Ingestion Exposure Pathway

Dose projections form the basis for protective action recommendations for the Ingestion Exposure Pathway/Post Plume EPZ. Different emergencies may release different amounts of radioactivity and different types of radionuclides. Before the dose an individual receives from the Ingestion Exposure Pathway can be calculated, food chain (food, milk, water) samples must be obtained to identify the concentration of each radioisotope. These concentrations are compared to Food and Drug Administration (FDA) and FEMA developed Derived Intervention Levels (DILs) which relate to the level of radioactivity in various samples to the Ingestion Exposure Pathway Protective Action Guide (PAG). Doses received from other pathways are not considered when evaluating the ingestion pathway PAGs.

For the milk pathway, DILs have also been developed for soil and pasture samples. This provides the ability to determine whether the PAGs would be exceeded for the milk pathway if dairy animals are allowed to graze on contaminated pasture.

H. Food, Water and Environmental Sampling

Environmental monitoring program involves the collection of data for one or more of the following purposes:

1. to establish a baseline; that is, gathering information on the basic site characteristics prior to development or to establish current conditions;

2. to establish long term trends in natural unperturbed systems to establish natural baselines;

3. to estimate inherent variation within the environment, which can be compared with the variation observed in another specific area;

4. to make comparisons between different situations (for example, pre-development and post development; upstream and downstream; at different distances from a source) to detect changes; and

5. to make comparisons against a standard or target level.

The implications of this definition are that:

1. environmental monitoring programs should involve ongoing, repetitive sampling over a number of years;

2. environmental monitoring programs should be scientifically rigorous and be based on testable hypotheses;

3. sampling programs designed to test the hypotheses should be such that the results may be used to detect temporal trends and/or spatial differences; and

4. environmental monitoring programs should attempt to establish empirical links between human activities and their effects on the environment.

A minimum of two sampling teams will be mobilized for the collection of animal feed, liquid milk, water, shellfish samples, and of samples from pastures, crops, orchards, and food processing facilities. RadHealth staff may be assisted by personnel available from the support agencies for sampling activities.

The RadHealth Accident Assessment Team will determine if, where, and when samples should be collected. Initially, sampling is done to confirm the deposition dose projections. Swipes and/or soil samples are used for identification of the Restricted Zone. Sampling and analysis is required for Ingestion Exposure Pathway protective actions.

All samples collected will be prioritized for analysis by the RadHealth Accident Assessment Team. Preliminary screening of some samples may occur at the IFO, if activated, prior to complete analysis. All samples will be forwarded to the RadHealth Laboratory in Concord or other designated laboratories for analysis. Results will be sent from participating laboratories to Accident Assessment staff.

IV. Laboratory Analysis

The RadHealth Laboratory Supervisor will receive field samples collected by RadHealth sampling personnel, other state agencies. If activated, the Federal Radiological Monitoring and Assessment Center (FRMAC) and Compact personnel will coordinate the analysis of their own samples. The Lab is capable of a 24-hour operation and will continue until they have reached their maximum capability at which time FRMAC and the Compact will assist in transport/analysis/reporting by other laboratories.

All samples received at the laboratory will be processed in accordance with the priorities established by RadHealth Accident Assessment Staff. The priorities may reflect the results of sample screening activities. During the plume phase of the emergency, priority will be given to analysis of air sample media.

Samples will be analyzed as priorities permit at the RadHealth Laboratory. The laboratory is designed and equipped to be a full service, stand-alone facility. Based upon doing a Gamma Spectrographic analysis on samples up to 48 individual samples can be processed in a 24-hour period. Should the volume of samples and their priorities exceed the capacity of the laboratory they will be dispatched by the quickest means possible to other laboratory facilities under FRMAC and/or the Compact. Prior to dispatch of samples from the RadHealth Laboratory, the Laboratory Supervisor will contact the Accident Assessment staff to: 1) confirm that the Compact and/or FRMAC have been activated; 2) confirm sample priorities; and 3) receive authorization to dispatch the samples out of state. The primary means of communication between RadHealth Laboratory and the Accident Assessment Staff will be commercial telephone with HSEM radio back-up. Electronic and/or faxes may also be used to communicate information.

Analysis results for samples sent to FRMAC and/or Compact laboratory facilities will be provided to the RadHealth Laboratory Supervisor who will forward all results to the Accident Assessment Staff.

V. Additional Assessment and Monitoring Support

A. Emergency Management Assistance Compact (EMAC)

When it is determined that additional resources are needed to respond to an accident at a nuclear power plant then a request will be forwarded to the SEOC for the additional resources needed. The request will contain the following information:

1. Description of the problem.
2. Type of resources needed.
3. Which state has the resources?
4. Where the resources need to be delivered.
5. Clear direction to assembly point or point of delivery.
6. Estimated time the resources will be needed.
7. If resources include people, what arrangements have been made for housing, etc.

If the Governor or HSEM Director or designee concurs with the need for assistance as requested, the Governor, HSEM Director or designee will contact the Governor or designee of the Emergency Management Assistance Compact (EMAC) state that has the resources and request the specified assistance.

B. Federal Radiological Monitoring and Assessment Center (FRMAC)

The provisions of the *Federal Radiological Monitoring and Assessment Center* will be used for interagency coordination for radiological emergency response within the Department of Energy, Region I.

Activation of the Federal Radiological Monitoring and Assessment Center will occur when the Department of Energy has been notified that a radiological emergency has occurred and that federal assistance has been requested by an authorized person. Authorized persons are the DPHS Director (or designee), FEMA representative in SEOC, RHTA, for radiological monitoring and laboratory assistance, and/or the HSEM Director or designee in the SEOC. The request for federal assistance will specify the federal resources requested and expected time of arrival at specified nuclear power plants as provided for in *Appendix C of the Federal Radiological Monitoring and Assessment Center; FRMAC Operations Manual, 2010.*

The following personnel and equipment resources are available and will be provided on request:

- Radiological monitoring and environmental specialists with supporting equipment.
- Aerial radiological monitoring equipment.
- Fixed and mobile laboratory support.
- Remote handling equipment.
- Technical assistance in predicting the dispersion of radioactivity into the environment.
- Medical consultation on the treatment of injuries complicated by radioactive contamination.
- Technical support for emergency public information.

Chapter 10 – RADIOLOGICAL EXPOSURE CONTROL

I. General

This Chapter establishes the means and responsibilities for controlling radiological exposures to emergency workers involved in an emergency response and others affected by an incident. Emergency response organizations will limit exposure to emergency workers by:

1. Limiting the amount of time spent in radiation areas.
2. Limiting entry into radiation areas to the maximum extent possible.
3. Using protective clothing, respirators or decontamination when necessary.
4. Using dosimetry and radiation monitors to track worker's exposures.
5. Make provision for 24-hour capability to determine doses received.
6. Issuing Potassium Iodide to the workers when directed by RadHealth, as per their Standard Operating Procedures.

II. Exposure Monitoring

A. Emergency Worker & Temporary Access Personnel Dosimetry

Radiological exposure in NH is based on the total risk to the exposed individual, which includes both external and internal exposures. This total dose or TEDE (Total Effective Dose Equivalent) cannot be measured using only self-reading dosimeters. To protect emergency workers and comply with the EPA PAGs, NH will initially apply an administrative correction factor to the results read on direct reading dosimeters. Use of this correction factor means a self-reading dosimeter reflects only 1/5 of the total dose. This correction factor should conservatively account for the inhalation dose which cannot be measured prior to or during an emergency mission. The administrative correction factor will remain in effect until the Division of Public Health (DPHS) personnel have sufficient technical data to change the correction factor which is not anticipated until after any evacuation is completed.

To simplify the effect on emergency workers of using a correction factor with self-reading dosimeters, DPHS personnel will pre-calculate results of a correction factor and provide the results in terms of what an emergency worker would see on a self-reading dosimeter. All the emergency worker or their supervisor must do is follow the instructions received when the dosimetry is issued.

For example, the administrative correction factor of 5 has been included in the final numbers given in Figure 10-1, Emergency Worker Radiological Limits and Action Levels. Although the EPA PAGs might permit an emergency worker to get up to 10R to protect valuable property, in New Hampshire emergency workers protecting valuable property during an evacuation would be instructed to report when their direct reading dosimeter reads 2R.

Two direct reading dosimeters will be used to monitor the external gamma exposure of emergency workers working in the EPZ or people allowed temporary access to a Restricted Zone. These are direct-reading "pocket-types", a 0-200 mR and a 0-20R. Emergency workers volunteering for specific life-saving missions in accordance with RadHealth procedures will be issued direct-reading dosimeters capable of reading above 20R. Additionally, all emergency workers will be given a thermoluminescent dosimeter (TLD), which serves as a permanent record and measures the exposure an emergency worker receives during the entire emergency or assignment period.

Emergency workers within the EPZ are required to wear all dosimetry at all times. Individuals receiving Exclusion Area Passes, who were not issued dosimeters previously, will be issued dosimeters at the IFO (if activated) or at a location near the access points to the Restricted Zone.

Dosimeters, along with instruction cards, will be issued to emergency workers having assignments in the Plume Exposure Pathway EPZ at an ALERT level. Emergency workers assigned duties subsequent to an ALERT

declaration will be issued dosimeters prior to beginning their duties. Individuals granted Exclusion Area Passes will be issued dosimeters with their passes.

When issued direct-reading dosimeters, personnel will begin reading them at 30-minute intervals. Upon notification of the releases of radioactive materials, each worker will be instructed to read their direct-reading dosimeters at 15-minute intervals. Reception Center personnel need not adhere to the 15-minute requirement but should read dosimetry periodically. Emergency workers will report readings to their respective supervisor at levels specified in the "Radiological Exposure Control Decision Criteria" section. Under no circumstances should emergency workers place themselves in danger to take a dosimetry reading. The reading should occur as soon as the worker is out of harm's way.

In a HAB incident, protective/precautionary action decisions and actions for mutual aid and non-EPZ responders will be consistent with that for other emergency responders and relayed to the ICP/staging areas. Radef Officers for the ICP and Staging Area will be provided by the local jurisdictional community. The SEOC will assist the IC/UC in assigning Radef Officers to the ICP/Staging Areas, as requested.

Emergency workers from outside the 10-mile EPZ will respond to the ICP/Staging Area where they will be issued dosimetry, KI, protective clothing and just-in-time training as needed. All dosimetry issued or utilized must meet the one-year calibration cycle requirement. Additional dosimetry and KI will be stored at the EOF/IFO for use at the ICP/Staging Area.

B. Post – Event

After the event has been terminated, the dosimeters will be returned to the point of issue. If emergency workers have been ordered to evacuate, they will turn in dosimeters at the monitoring and decontamination station at the reception center to which they are evacuated. All TLDs in use will be forwarded to the RadHealth Radiological Exposure Control Clerk. The RadHealth RSO will coordinate TLD processing to determine actual exposures for permanent records, collect records from each facility that issued dosimetry and be responsible for emergency worker permanent exposure records.

Dosimeters are stored, along with other radiological monitoring equipment, at the appropriate designated facilities, including the ICP. HSEM will be responsible for providing and maintaining an adequate supply of radiological equipment at each facility. The inventory of the quantities and types of radiological equipment necessary to implement this section of the plan is contained in local plans and staffing for each facility/response component (Inventory Checklist Attachment A – Implementing Procedures for State Agencies). Should there be a need to establish an Incident Command Post, dosimetry will be available for responders, including those presenting themselves through mutual aid compacts. A Radef Officer will be assigned to the ICP. At the end of the incident should responders functioning through the ICP remain uncontaminated, dosimetry will be returned to the ICP Radef Officer.

III. Thyroid Protection

Potassium iodide can be used to saturate the human thyroid gland with stable iodine and thus prevent the uptake of inhaled or ingested radioactive iodine. Potassium iodide does not protect other parts of the body against radiation exposure and does not protect the thyroid from external radiation. The greatest percentage of thyroid protection occurs when potassium iodide is administered at or about the time of exposure.

Both the direct-reading dosimeters and TLDs record external exposure only. They do not have the capacity to separately monitor radioiodine uptake by the thyroid. Potassium Iodide (KI) will be stored with dosimetry.

A. Emergency Workers

KI will be distributed to emergency workers who will be working within the 10 mile EPZ when dosimetry is issued. Its use will be considered if projected doses of iodine are expected to exceed the EPA PAG of 5 REM for thyroid exposure. The DPHS Director has the responsibility for authorizing emergency workers to begin taking KI when there is a projected dose of 5 Rem, or, at the discretion of the DPHS medical director. Decisions will be based on accepted health physics practices and considerations of confirmed clad damage, imminent release, or other relevant factors.

Although an emergency worker has been protected from radioiodine by KI, protection from other inhaled radionuclides is important. If releases of these other radionuclides are projected to occur in amounts that requiring protection, emergency workers will be removed from the area. RadHealth will decide which emergency workers will be allowed to re-enter contaminated areas.

B. Institutionalized Individuals

KI is stockpiled in select institutions. Institutionalized individuals include patients in hospitals, residents in licensed, extended care facilities, individuals who are confined in a house of correction, or who are staff employed by those facilities and whose presence in the facility is necessary during a radiological emergency.

The KI will be made available for ingestion by all staff and by confined individuals only after authorization by the DPHS Director. Administration to hospital patients and residents of extended care facilities will also occur only after RadHealth authorization, and only if the individual's physician has determined that the use of KI is appropriate for the individual. Such determination may be made in advance and noted in the individual's medical records.

C. General Public

The State of New Hampshire has elected to pre-distribute KI to interested members of the general public. Members of the public who live, work, or go to school in either the Seabrook or Vermont Yankee EPZ may apply for a free KI tablets. The pre-distribution of KI is ongoing. Application forms are included in the Emergency Planning Calendars, available at the town halls in each EPZ municipality, or available online at the DPHS website.

In the event of an emergency, the public will be notified via an EAS/EPI message that emergency workers have been authorized to take KI in a particular area of the affected EPZ. The message will advise members of the public who are still in this affected area, that they should continue to evacuate or shelter-in-place and if they have KI with them they should consider taking it, if they have not already done so. If there is a necessity to further access and/or distribute KI to the general public, the SNS Plan, or other NH-based support plans will be considered.

IV. Radiological Exposure Control Decision Criteria

RadHealth is responsible for all decisions relating to radiological exposure of emergency workers. RadHealth personnel located in the IFO, EOF, SEOC or other identified place, will be kept informed of local emergency worker exposures via the local EOCs and will be directly responsible for state workers. Emergency workers will report to their supervisors as predetermined exposures are reached. When reached, RadHealth will either order emergency workers to leave the area or will authorize increased exposures. Emergency workers will not be allowed to exceed the EPA PAGs established for emergency workers. Local EOCs and supervisors of state workers will submit hourly reports of the number of emergency workers reaching the exposure levels listed in Table 2.7-1. to the State Radiation Safety Officer (RSO) through HSEM Local Liaisons.

The first reporting level is a 0-200 mR dosimeter reading of 175 mR, which is well below the PAG for the general population external dose. [For the purpose of radiological exposure control, external gamma dose measured in rems is considered to be equivalent to external exposure measured in Roentgen (R)]. This reading is important because (l) it indicates radiological exposure is occurring, and (2) the upper limit of the 0-200 mR dosimeter is being reached. At this point, emergency workers will be allowed to continue with emergency operations, but are required to begin reading their 0-20 R dosimeter and notify their supervisor or local EOC. Supervisors and the local EOC should consider exchanging emergency workers between work locations at this point to keep dose levels as low as possible.

The next threshold or reporting level occurs when a reading of 1 Rem is recorded for any emergency worker. At this exposure level, local EOCs and supervisors of state emergency workers will determine if a worker is critical to the emergency response. An emergency worker is considered critical if the worker is performing a task upon which the ability to effectively implement a protective action for all or a segment of the general public is dependent. Emergency workers not performing a critical task who have a dosimeter reading greater than 1 Rem will be ordered out of the affected area. If a replacement is available for the worker, the emergency worker will leave the affected area when relieved.

For situations where the worker is critical to the response and a replacement is not available, the local EOC or supervisor (State employees) must have permission from the DPHS Director, via the State RSO, to assign the worker a new threshold or action level of 2, 3, or 4 rem. As a general guide for non-replaceable, critical workers using direct reading dosimeters - a maximum of 2 R will be permitted for emergency workers needed to perform actions to protect valuable property and a maximum of 4 R will be permitted for emergency workers needed to perform lifesaving activities or to protect large populations. Readings between 4 R and 5 R are used as a buffer to permit emergency workers to be relieved and get out of the affected zone before exceeding 5 R. All emergency workers who have this level of exposure will be ordered out of the affected area. Only volunteers who have had specific briefings by RadHealth personnel and only for specific lifesaving activities can exceed 5 R.

If approval is given, the State RSO will assign a new reporting threshold for the worker. This will be a maximum of 1 R higher than their previous level and will not exceed 4 R. In addition, RadHealth may specify additional protective measures which may provide a dose savings to the worker. Emergency workers will be required to implement any additional protective measures deemed appropriate or leave the area.

The actions described above will be repeated for emergency workers reaching the thresholds of 2, 3, and 4 R respectively. No emergency workers should exceed the upper limit of the EPA PAG without extreme justification and specific DPHS approval.

An additional action occurs when a direct reading dosimeter cumulative reading of 1 R has been reached for an emergency worker. Workers with cumulative dosimeter readings of 1 R or greater will be reported to the RadHealth Radiological Exposure Clerk for inclusion into the Radiological Screening Program (RSP).

To exceed 5 R on a direct reading dosimeter the individual must be a volunteer, engaged in life saving action, and fully aware of the risks. These volunteers will be provided information on the expected effects of such doses by RadHealth personnel and approved case by case by the DPHS Director. This policy provides reasonable assurance that no emergency workers will be allowed to exceed the exposure limit for emergency workers. The State RSO will provide recommendations to the DPHS Director on exposure control measures.

If the radiological release includes radionuclides other than noble gases, then other exposure pathways become important. These exposure pathways may lead not only to external doses, but also to doses to the thyroid. In these cases, the following additional procedure will be used to protect against thyroid doses.

If radioiodine has been released, all emergency workers will be required to have a thyroid gland screening check. Emergency workers with a thyroid check reading of greater than or equal to 300 counts per minute (cpm) above background as measured by a CDV-700 or equivalent (window closed) will be restricted from further entry to the affected area. The EOC Radiological Health Technical Advisor (RHTA) will be responsible for determining follow-up actions necessary for any worker exceeding the 300 cpm above background thyroid screening threshold, and ensuring that such workers are added to the RSP. If radioiodine exposure is expected to exceed the PAG for thyroid dose (5 Rem), the RadHealth Director may authorize the use of KI for emergency workers who remain in the affected area. This decision will be made early enough to allow sufficient time for KI to be effectively used.

RadHealth will establish protective measures required for entry to the affected area and individually approve entries of emergency workers, farmers, owners or any other person allowed temporary access to the Restricted Zone. All individuals granted approval to enter a contaminated Restricted Zone will be added to the RSP. Even if life-saving missions are necessary, entry will only be granted by the RadHealth Director.

All individuals are required to return their dosimeters to the facility from which they were distributed, or to the reception center to which they were evacuated. RadHealth will analyze emergency worker exposure and will send a record of exposure to all emergency workers who have been exposed.

V. Decontamination

Emergency workers, farmers, or others allowed access to the Restricted Zone, equipment and supplies used in the emergency response; evacuees, service animals, pets and evacuees' vehicles may become contaminated by radioactive particulates deposited by the plume. Host community emergency personnel will monitor evacuees and vehicles arriving at reception centers for contamination. Depending on the situation, monitoring and decontamination operations near the Restricted Zone access points may be established to limit the spread of contamination.

Emergency workers, evacuees, service animals, vehicles, equipment, and supplies should be monitored for contamination and, if required, decontaminated at a reception centerIf emergency workers have wounds, which require medical attention, they will be sent directly to a pre-selected medical facility. Service animal and pet contamination levels will be consistent with those of humans.

Any unaccompanied minor with contamination levels, which exceed 300 cpm above background, will be decontaminated under RadHealth supervision. For an emergency at Seabrook Station, monitoring and decontamination of state field monitoring team personnel equipment, supplies, and vehicles may be done at reception centers. For Vermont Yankee (VY), state field monitoring teams and equipment will be monitored at the reception center.

A. Means of Decontamination

Decontamination procedures will be implemented by host community emergency personnel with advice from RadHealth and Dept. of Agriculture, Markets & Food. Decontamination of evacuees, pets/service animals and emergency workers will be accomplished according to established procedures by three primary methods: (1) local decontamination; (2) general decontamination; and (3) a combination of local and general decontamination.

If internal contamination is indicated or if decontamination is ineffective (monitoring after several decontamination attempts shows greater than 300 cpm above background), the Public Health Liaison at the decontamination operation will seek direction for further decontamination efforts from the EOC RHTA at the SEOC.

Guidance from the State EOC will be approved by the Director of DPHS and based on a range of factors such as level of contamination, the number of people affected, and the physical and psychological condition of persons affected. Options for further actions may include more intensive decontamination, assignment to a follow-up monitoring program, referral to a medical treatment facility, or a decision that no further actions are required. Any

injuries found to be contaminated will result in referral to a medical treatment facility. The RSP will be used to track all individuals requiring any type of follow-up action.

Vehicles, possessions, and equipment, which are contaminated, will be isolated. Materials that have not been decontaminated will remain isolated according to procedures until recovery operations are initiated by RadHealth personnel. Disposal of contaminated wastes will be supervised and coordinated by RadHealth personnel and performed by qualified and approved radioactive waste handlers under contract, in accordance with the New Hampshire Rules for Control of Radiation (RSA 125:F) and Monitoring/Decontamination Procedures. In addition, contaminated waste could be disposed of in accordance with an agreement between the State of New Hampshire and the affected facility.

B. Radiological Screening Program (RSP)

The RSP is a tracking system used to manage exposures in the RadHealth exposure control program. It provides the information necessary for short and long term follow up of both emergency workers and members of the public who, in general, have a measured TEDE of 5 Rem or greater, or internal or external fixed contamination.

The RSP is administered by RadHealth. Persons enrolled in the program will be evaluated and recommendations for medical referrals, bioassays, or other immediate actions will be made. Further long term tracking may also be necessary depending on the nature of the incident and the overall exposure levels. The RSP will be provided on a 24-hr basis.

All emergency workers, both state and local, and those persons returning from a Restricted Zone whose dosimetry reads 1 R or greater will be enrolled by the Radiological Exposure Control Clerk. In addition, those emergency workers who show evidence of internal contamination will be enrolled. Those emergency workers who show fixed (unable to be decontaminated below 300 cpm above background) external contamination will be enrolled in the RSP, as well.

Members of the general public and emergency workers who report to reception centers are eligible for enrollment if there is evidence of excessive exposure based on symptoms or a statement which indicates a prolonged period of time in the plume without shelter. This is decided in conjunction with RadHealth Accident Assessment. Also, members of the general public and emergency workers who have evidence of internal contamination will be enrolled.

Persons who show fixed external contamination and cannot be decontaminated to below 300 cpm (above background) may be enrolled in the RSP at the discretion of the DPHS Director. For emergency workers who report dosimeter readings of 1 R or greater, the Radiological Exposure Control Clerk will enroll them in the RSP.

The Public Health Liaisons will enroll members of the general public or emergency workers who are eligible for enrollment. In addition, the Public Health Liaisons may enroll any person referred to him/her. The following represent some examples of people they might enroll:

- Individuals that are sent to an MS-1 or other hospital because of injury and exposure or contamination. (Contaminated individuals should be evacuated only to MS-1 hospitals).
- Individuals from a special facility who were monitored at a host facility and who are found to be eligible for enrollment.

As much information that is immediately available will be entered on forms. If all required information is not immediately available, enough information will be recorded so that the person may be located and contacted at a later date to obtain the rest of the information. The following information is required for adequate long term follow-up but may have to be obtained in later contacts: name, date of birth, sex, race, address, work type, home and work phones, nearest relative phone number. In addition to the above information, comments concerning length of time in the plume area should be recorded along with recommendations made to the person.

C. Service Animal Decontamination

Service animals and household pets are to be considered when planning for evacuations. Service animals accompanying disabled evacuees are monitored in accordance with the same standards and trigger/action levels for decontamination as humans. Evacuees' service animals are brought by the evacuees to reception centers for monitoring and decontamination, as appropriate. DPHS/RadHealth, in conjunction with the N.H. Department of Agriculture, Food and Markets may provide guidance and/or resource support for this activity. Owners will be responsible for providing cages for their animals, as appropriate.

Emergency Worker Radiological Limits and Action Levels Figure10-1

Type of Limit	Action Level	Action Required
TEDE	**175 mR**	**Emergency Worker:** Reports reading to supervisor. **Supervisor:** Reports reading to Local EOC and or HSEM Local Liaison. Determines if the emergency worker stays in place, is replaced, or position no longer needs to be staffed.
	1 R	**Emergency Worker:** Reports reading to supervisor. **Supervisor:** Reports reading to Local EOC and/or HSEM Local Liaison. Determines if emergency worker is critical or the position no longer needs to be staffed. If the position is critical but the worker is not, then the worker is replaced. If both are critical, then permission and new threshold level must be obtained from RadHealth via the HSEM Local Liaison.
	2R	Maximum level for protecting property. Same as 1 R
	5R	Maximum life-saving exposure in New Hampshire.
To Thyroid (Projected)	**5R**	RadHealth Director authorizes ingestion of potassium iodide (KI)

Chapter 11 – PROTECTIVE RESPONSE

I. General

The purpose of this Chapter is to establish the range of protective actions that are available to State and local governments for the protection of the public in the event of an accidental release of radioactive material from a nuclear power plant, including the ingestion pathway.

II. Protective Action Guides (PAGs)

Protective Action Guides (PAGs) are the numerical criteria which act as trigger points for initiating protective response actions. The Environmental Protection Agency (EPA) has developed PAGs for radiological emergency response planning for direct exposure to radioactive materials within the Plume Exposure Pathway EPZ. These guides, as well as the scientific basis for selecting them, are published in the *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400).*

The PAGs are expressed in terms of the Total Effective Dose Equivalent (TEDE) and thyroid Committed Dose Equivalent (CDE). TEDE is the projected sum of the external exposure from airborne and deposited materials and the committed dose to internal organs from inhalation of radioactive materials from the passing plume. The thyroid CDE is the committed dose to the thyroid from inhalation of radioiodines from the passing plume. These guides are defined in terms of the projected dose that would occur if no protective actions were taken in response to a release from a radioactive source. No consideration of prior doses is taken into account with these PAGs.

A TEDE and the reading on a direct reading dosimeter is not the same thing. EPA PAGs are provided in terms of TEDE. TEDE has many factors which include both internal and external dose. Currently, no system exists to directly measure TEDE. However, dosimeters reflect a major portion of the external dose needed to calculate TEDE. This means dosimeter readings can be used with other data to determine the TEDE for PAG reference purposes. New Hampshire has dosimeters and can use the readings as part of a TEDE calculation. However, all the data necessary for calculating a TEDE is not expected to be available during the early stages of an emergency. Upon the recommendation of the Federal Emergency Management Agency (FEMA), New Hampshire uses correction factors to approximate TEDE until RadHealth has more complete data in the later stages of an emergency. This correction factor means the reading on a direct reading dosimeter reflects only 1/5 of the TEDE. To simplify use of dosimeters for the general population and emergency workers, the correction is already incorporated into the dosimeter dose limits outlined in Figure 10-1, Emergency Worker Radiological Limits and Action Levels.

III. Protective Actions

A. Plume Exposure Pathway

1. General Population/Special Facilities:

The principal exposure sources for the plume exposure pathway zone includes whole body external exposure to gamma radiation and inhalation exposure from the passing radioactive plume. Based upon plant conditions, projected doses are used to evaluate and re-evaluate recommended protective actions.

Protective actions are initially based on plant status and prognosis as reported by the plant. As shown in Figure 11-1, Protective Action Guides for the Plume Exposure Pathway, EPA delineates a range of PAG doses for the general public based on TEDE. Evacuation of the general population is initiated at the lower limits of 1 Rem TEDE or 5 Rem thyroid CDE under normal conditions. For hospitals and extended care facilities where there is a higher risk associated with evacuation, the corresponding limits are 5 Rem TEDE or 5 Rem thyroid CDE. Evacuation of all towns within a 2-mile radius and 5-miles downwind, and

sheltering-in-place in all remaining towns is the pre-determined protective action for the GENERAL EMERGENCY ECL. During a suspected Hostile Action Based (HAB) situation, "Sheltering In Place" (SIP) throughout the entire EPZ would be the default protective action. These pre-determined protective actions *may* be expanded or otherwise modified depending upon the specific conditions existing at the time of the GENERAL EMERGENCY notification.

In unusually hazardous conditions these limits can be increased to 5 Rem TEDE or 5 Rem thyroid CDE for the general population and 10 Rem TEDE for hospitals and extended care facilities (note that potassium iodide (KI) is administered for hospitals and extended care facilities at doses above 5 Rem thyroid CDE). Examples of unusually hazardous conditions include the presence of severe weather, competing disasters and local physical impediments which impede evacuation. There is no limit for implementing sheltering in place. At a minimum, sheltering in place is initiated above 1 Rem TEDE or 5 Rem thyroid CDE for any population group that is not evacuating.

Precautionary actions may also be recommended for specific population groups at any ECL. These population groups may include school children, seasonal beach populations, recreational populations and boaters. Although it is unlikely, except in the case of a HAB event protective actions may be taken at classifications lower than a GENERAL EMERGENCY for the general population in the plume exposure pathway.

2. Emergency Workers

Emergency worker PAG doses, at exposures greater than the PAG doses for the general public, must be specifically authorized by RadHealth. These emergency worker PAGs are listed in Table 2.6-1, Protective Action Guides for the Plume Exposure Pathway, and the equivalent corrected dosimeter readings are listed in Figure 10-1. Emergency Worker Radiological Limits and Action Levels. After termination of the emergency phase (releases terminated), normal occupational limits apply for emergency workers.

The highest emergency worker PAG doses may be authorized by RadHealth for volunteer emergency workers only when necessary to save lives or to avoid extensive exposure to large populations. These PAG doses, however, have little applicability to offsite emergency response activity. They are more directly applicable to the onsite emergency workers at the nuclear power plant sites.

B. Ingestion Pathway Zone

The principal exposure source will be from the ingestion of contaminated water or foods. For planning purposes, the zone has a radius of 50 miles around the nuclear power plant. Protective Action Guides have been adopted by the Department of Public Health and are consistent with federal guidance contained in the Federal Drug Administration's document "Accidental Radioactive Contamination of Human Food and Animal Feeds: Recommendations for State and Local Agencies" dated August 13, 1998. The ingestion pathway, in general, represents a longer term problem. Maps for recording survey and monitoring data, key land use data, dairies, food processing plants, water sheds, water supply intake and treatment plants and reservoirs will also be maintained by appropriate State agencies. Lists of facilities that regularly process milk products and other large amounts of food or agricultural products originating in the Ingestion Pathway Zone will also be maintained by the NH Dept. of Agriculture, Markets and Food in coordination with RadHealth and HSEM.

Protective Action Guides for the Plume Exposure Pathway Figure 11-1

(Do not confuse these with the corrected dosimeter limits in Figure 10-1)

Population	PAG	Protective Action	Comments
General Population	1 Rem TEDE 5 Rem CDE (Thyroid)	Evacuation	Use in normal conditions
	5 Rem TEDE	Evacuation	Use in special situations such as severe weather, competing disasters, evacuation impediments
	5 Rem CDE (Thyroid)		Authorize KI
Special Facilities	5 Rem TEDE	Evacuation (Shelter up to these limits)	Authorize KI
	10 Rem TEDE	Evacuation (Shelter up to these limits)	Use in special situations such as severe weather, competing disasters, evacuation impediments
Emergency Workers	5 Rem CDE (Thyroid) 5 Rem TEDE	Authorize KI	Normal Limit
	10 Rem TEDE		Use for protecting valuable property
	25 Rem TEDE		Use for life-saving or protection of large populations
	>25 Rem TEDE		Use for lifesaving or protection of large populations on a volunteer basis

Reference EPA 400-R-92-001

IV. Precautionary and Protective Actions

New Hampshire will rely on a combination of precautionary and protective actions for limiting the direct exposure of the general public within the Plume Exposure Pathway EPZ. The options of precautionary actions include school cancellation, early release or transfer of students to reception centers, closure of parks and recreational areas, closure of the affected beaches between May 15 and September 15 (Seabrook Station (SS) only), and the establishment of a water safety zone. Protective action options include sheltering-in-place, “lock-downs”, and/or evacuation that will be combined with traffic and access control to prevent unauthorized entry into an area where protective actions are in effect. If an event has caused an Incident Command Post and/or Staging Area to be established, all precautionary/protective actions will be discussed thoroughly with the Incident Commander/Unified Command. Care will be given to protect the public and response workers to the greatest extent possible when dealing with a HAB incident. Sheltering-in-place may be the safest alternative based upon the events in progress.

The Governor of New Hampshire has the primary responsibility for approving protective actions. In the governor's absence, this authority is delegated according to state law.

A. Precautionary Actions

There are several precautionary actions which may be recommended at early event classification levels for schools, beaches, and boaters.

1. Schools

At the ALERT or earlier, NH will consider several precautionary actions for schools, in coordination with RadHealth and the Dept. of Education. Actions may include: school cancellation, early release, student transfer to reception centers, and cancellation of extracurricular activities. Precautionary action recommendations for schools will be passed from the SEOC to the local EOCs/EMDs. Recommendations will also be transmitted through the Dept. of Education to the Superintendents of the affected school systems**.** Schools will follow their established early release protocols and procedures. Local emergency operations centers working with their local school authorities will ensure that precautionary actions taken by the school are known to appropriate emergency officials.

2. Beaches (SS Only)

The precautionary action of closing potentially affected beaches near SS may be implemented by the State of NH at the ALERT ECL. This action would be considered during the season of heaviest beach use (May 15 to Sept. 15) if the prognosis for plant status indicates degrading conditions.

Evacuation of potentially affected beach area populations may be recommended as a precaution at the ALERT ECL based on the same seasonal conditions and on predetermined plant parameters identified to state decision-makers by the plant.

3. Parks and Recreational Areas

At the ALERT EMERGENCY ECL or earlier, NH will consider the precautionary action of closing parks and recreational areas. Individuals located in state parks and outdoor recreation areas will be asked to leave open areas in the Plume Exposure Pathway EPZ. The primary means of notification of campgrounds and other outdoor recreation areas is the siren system for SS and special notification procedures and NOAA tone alert radios are used in the VY EPZ.

Additional information may be provided by signs posted in these areas. DRED, Fish and Game and Marine Safety have the responsibility to locate and notify individuals along the Connecticut River from Massachusetts border to Vermont Border within the 10 mile EPZ and at recreational facilities within the SS 10-mile EPZ. The U.S. Coast Guard is responsible for notifying individuals in boats on the open sea adjacent to SS.

4. Boaters

For boaters on the ocean areas around SS, the U.S. Coast Guard will be requested at the SITE AREA EMERGENCY ECL or earlier to establish a marine safety zone. This zone will be in a 5 or 10 miles radius from SS, depending on emergency conditions, and will serve as an area for the alerting and restriction of marine traffic. Detailed guidance for the U.S. Coast Guard for establishing the marine safety zone is contained in internal Coast Guard procedures.

B. Sheltering-in Place/Evacuation/Lock-downs

Except for the institutionalized population, sheltering-in-place/"lock-downs" and evacuation will be implemented in the following manner. Protective action recommendations (PARs) will be determined and

implemented on a municipality-by-municipality basis. One municipality may be advised to shelter-in-place while an abutting municipality or ERPA (SS) is advised to evacuate. HAB events may call for a "lock-down" especially of school facilities to ensure the safety of the children and staff.

The recommendation to implement sheltering-in-place or evacuation of a particular town in the Plume Exposure Pathway EPZ is based on plant conditions, event conditions (e.g. HAB event) or on the assumption that projected doses to the general population would equal or exceed EPA PAGs for these actions. The recommendation comes from the decision-makers within the SEOC, based upon consultation with DPHS RHTA and other appropriate personnel from ESF#8 and/or the ICP and ESF#13.

For incidents involving an Incident Command Post/Staging Areas, discussions with the Incident Commander/Unified Command will occur with the SEOC to determine the best protective action decision for on-scene responders and the affected public. Conditions may warrant strong consideration of a shelter-in-place option in lieu of evacuation.

Sheltering-in-place for radiological incidents involves remaining inside, closing all doors and windows, turning off all ventilation systems using air drawn from outside, extinguishing all unnecessary combustion, and sealing, to the extent possible, all other access to the outdoor air. Heavier construction materials or increased layers of building material increase the amount of protection from exposure to radiation. Therefore, sheltering-in-place should be sought in the lowest level of a building (e.g., in basements), away from windows. Sheltering-in-place can reduce both external and thyroid doses.

The difference in external and thyroid sheltering-in-place effectiveness over time is that whole-body sheltering protection is almost entirely dependent upon the type and quantity of construction material providing shielding against gamma rays from a radioactive plume. These factors, and hence, the level of shielding protection remain constant over time. Conversely, inhalation sheltering protection is highly dependent upon the ability of a facility to limit the exchange of indoor air with outdoor air. Although this factor depends on type and quantity of construction material, the ability to limit air exchange tends to decrease with time since outdoor air can penetrate through the perimeter of doors, windows, and through small cracks, thus resulting in eventual air mixing. Thyroid sheltering-in-place effectiveness, therefore, decreases with time.

Based on these factors sheltering may be considered as a protective response for exposures to airborne releases with durations of several hours, and possibly more, depending upon the characteristics of the gaseous fission product releases. The dose reduction provided by a shelter is a function of its shielding and ventilation characteristics and the length of time for the plume to travel over the area. Sheltering-in-place becomes less attractive with increasing durations of exposure coupled with high magnitude releases.

Sheltering-in-place is a valuable protective action option for several reasons. It can be implemented quickly, usually in a matter of minutes. In addition, it is less expensive and less disruptive of normal activities than evacuation. Implementation and management of sheltering-in-place is also less demanding on the resources of the emergency response organization (ERO) since no vehicles, traffic control, or dispatching of emergency workers are required. It also encourages individuals to listen to Emergency Alert System (EAS)/Emergency Public Information (EPI) messages which enhances response to any additional evacuation should it be necessary. Access control would be required for municipalities where sheltering-in-place has been recommended.

Once a decision to recommend sheltering-in-place as a protective action has been made by the Governor ,or by law enforcement officials (in a HAB event) Homeland Security and Emergency Management (HSEM) will instruct the public via the EAS. The message may include, but is not limited to (1) the areas where shelter-in-place is recommended; (2) the basic shelter-in-place instructions which will be broadcast over the EPI broadcast outlets, which include:

- Close all doors, windows and vents
- Turn off all fans, heating or air conditioning equipment, using air drawn from outside
- Extinguish all unnecessary combustion
- Remain indoors until advised otherwise

- Move to the basement (if you have one), or a room with the fewest windows
- Do not use telephone except for an emergency
- Keep radio or TV on for further information
- Practice the four S's: If you see something, say something

Messages that will continue to keep the public informed during sheltering-in-place will be broadcast over the designated EPI broadcast outlets.

The Shelter-in-Place" concept provides for sheltering at the location in which the sheltering instruction is received. Those at home are to shelter at home; those at work or school are to be sheltered in the workplace or school building.

Transients located indoors or in private homes will be asked to shelter-in-place at the locations they are visiting if this is feasible. Transients without access to an indoor location will be advised to evacuate as quickly as possible in their own vehicles (i.e., the vehicles in which they arrived). Departing transients will be advised to close the windows in their vehicles and use re-circulating air until they have cleared the area subject to radiation. The large number of transients who are present in the beach area within two miles of SS during the peak summer months increases the possibility of some transient population without ready access to their own private source of transportation. While it is most likely that this population segment will seek transportation with other individuals departing the beach area, these transportation-dependent transients will be accommodated in temporary public shelters located in the beach area until state-provided transportation resources arrive.

Special Facilities Which May Be Evacuated at the Higher PAG Level (generally long-term care or medical facilities) in the Plume Exposure Pathway EPZs which may be subject to the higher PAG limits for evacuation are identified through ESF#8 or a special facilities list maintained through HSEM and/or DHHS. In situations where the general population is evacuated, these institutions may be sheltered up to these higher PAG limits. KI may be administered to institutionalized individuals who are sheltered in place in accordance with RadHealth procedures.

C. Evacuation

If potential radiological exposure can be avoided by implementing a timely evacuation, evacuation may be the preferred protective action. Where implementation of protective action is deemed appropriate, and where time and plant conditions permit, evacuation will generally be the selected course of action.

The constraints to evacuation are the time and resources required to initiate and implement the action. In addition, evacuation involves significant displacement of people, families and economic activities, and potential problems associated with controlling access and maintaining the security of evacuated areas. Likewise, an evacuation itself involves some limited potential public safety risk. These difficulties will be considered prior to recommending an evacuation.

The primary means of transportation for evacuation will be privately-owned vehicles of the evacuees. Each town that may require evacuation of its population has designated a person with the responsibility for assessing specific transportation needs of persons who cannot implement their own evacuation. Access/functional needs persons with no transportation are divided into categories which include identified sectors of the school population, other special facilities, residents with no transportation, residents with service animals and persons who have special transportation needs. Special arrangements have been made for the transport of these people.

Transportation assets for the Vermont Yankee EPZ are based upon the total needs of the community to be evacuated. Transportation assets for Seabrook Station are based upon the balance of assets needed after local community resources are activated by the EMD/local EOC.

1. Early Release/Evacuation of Schools & Day Cares

If an early release or evacuation is recommended during school/business hours, schools/daycares will follow their pre-determined procedures for an early release. Children/ who are not able to be released to the care of appropriate parents/guardians/caregivers (pre-identified with the school) will be bused directly to identified host schools, other identified facilities or reception centers. Transportation assets required will be coordinated by the state in conjunction with the local Emergency Operations Center (EOC) and school/day care authorities. Children will remain under supervision of either school/day care personnel until they are released to their parents/guardians/caregivers. Evacuation for schools is based upon schools the children are attending, not where the students live. If students are released from schools AFTER a release that may have affected the area where they were sheltered in place, students will be treated as the general public and report to the appropriate reception centers for monitoring and/or decontamination. Early release decisions are made by school administrators at the facility or SAU level.

2. Evacuation of Beach Transients Requiring Public Transportation (May 15- Sept. 15)

In the event an evacuation is recommended for beach areas in the Towns of Hampton and Seabrook, transients without transportation will be directed to temporary shelters until resources arrive to transport them to designated reception centers.

3. Evacuation of Other Special Facilities

Decisions regarding the evacuation of special facilities rest with the facility administrator and should be reported to the local EOC. Whenever possible, evacuations will be accomplished through utilization of private transportation assets including those that are facility-owned and/or facility-contracted. The balance of transportation needs will be coordinated by the local EMD or local EOC Transportation Coordinator with support from the State Local Liaison Facilitator, if needed vehicles will be dispatched to the facility, to local staging areas, where maps and directions to the facility will be provided or to other mutually agreed upon site. Correctional facilities, long-term care facilities and affected hospitals have individual written agreements with other facilities that will function as "host" facilities for their residents. ESF#8 may also be called upon to place medical patients in facilities with appropriate vacancies.

4. Evacuation of Residents Requiring Transportation

Provision for transportation assistance to residents who may be without transportation is coordinated by the local EOC. The number of persons requiring transportation support in each town during an emergency is identified in part by the access/functional needs population survey conducted by the HSEM annually or are known directly to local authorities. It is expected that the majority of residents requiring transportation, including persons who do not own or have access to transportation assets will be able to make arrangements with friends, neighbors, or relatives. In the VY EPZ, local EOCs will provide requests for their total needs to the state.

State provided transportation is also available during an evacuation for the SS EPZ. Buses will drive along pre-designated routes and pick up people who need transportation in the SS EPZ. The State EOC (ESF#1-Transportation) will direct the dispatch of the buses from the State Transportation Staging Area (STSA) to the local transportation staging areas in the SS EPZ. There, bus arrivals will be provided with route maps and directions for driving along the pre-designated routes. EPI messages indicate that buses will be provided for residents requiring transportation. Designated bus routes are outlined in the state emergency public information materials provided to the SS Plume Exposure Pathway EPZ residents. Each vehicle assigned to pick up residents requiring transportation will collect its passengers within the town and take them to the local transportation staging area. From the local transportation staging area, they will be transported to the appropriate reception center.

5. Evacuation of those Individuals with Requiring Special Assistance

Each town maintains a current list of town residents who require evacuation by special vehicle and residents that may require assistance to evacuate or be notified. This includes people who may only require assistance in boarding passenger vehicles as well as those who may require an ambulance or special van. The local Transportation Coordinator is responsible for coordinating the transportation requirements for the access/functional needs population. The Transportation Coordinator's procedure in each town includes the results of the HSEM Special Emergency Help Survey for access/functional needs evacuation demands. These results are listed with transportation requirements.

6. Evacuation Routes

The state has designated evacuation routes to be used in each of the Plume Exposure Pathway EPZs. The designated evacuation routes for VY and SS EPZ are identified in *Implementing Procedures for EPZ Communities, XII. Special Attachments & Forms, B. Evacuation and Diversion Route Description*. Traffic control points (TCPs), which in most instances are the responsibility of local emergency workers, will also expedite traffic flow during the implementation of an evacuation. If necessary, an evacuation can be implemented during adverse weather, including snow storms. The communities within the Plume Exposure Pathway EPZ have ample equipment for dealing with snow removal and route maintenance since this is a normal winter function in New Hampshire. The state has provided several means for supplementing local route maintenance capabilities should these become desirable. ESF#1-Transportation is prepared to use its maintenance equipment, including plows and trucks, and towing equipment to maintain these routes during adverse weather and as unforeseen impediments to evacuation occur. This equipment can be made available within a few hours of receiving requests for support. Should additional support be required, NH National Guard equipment and personnel may be used as a back-up.

Activation times for this back-up resource would be considerably longer. It would likely take between two and twelve hours to mobilize and dispatch National Guard resources. These state and local resources may also be used to remove impediments to evacuation, such as stalled vehicles. The state has also executed Letters of Agreement (LOA) with private tow companies indicating agreement to provide emergency support (through ESF#13). If needed, these vehicles can be requested through and coordinated by ESF#1 - Transportation.

The planning basis for an evacuation includes plant conditions, dose projections and field monitoring results, as well as any impediments to an evacuation. There are no facilities or businesses within the VY or SS Exposure Pathway EPZs whose shut-down time requirements will impact the timing of evacuation transportation resources. ESF#1 Transportation will rely upon the Traffic Management Manuals (TMM) for SS and VY and the Evacuation Time Estimates provided for VY and SS to help determine traffic capacities and evacuation times/duration.

Evacuation Time Estimates (ETE) data and Traffic/Access Control Points along with Evacuation Routes are found in the appropriate Traffic Management Manuals held by HSEM and ESF#1 – Transportation. Copies of the official ETE Manuals are also held at ESF#1 (DOT) and HSEM. Updating is done by ESF#1, ESF#2 (Mapping) and HSEM. Reviews are conducted periodically.

D. Access Control

Access control restricts unauthorized individuals from entering the Plume Exposure Pathway EPZ, or portions thereof. It is a necessary adjunct to either sheltering or evacuation. Access control prevents unknowing persons from entering an area where they may be exposed to radiation. It also helps clear traffic from the roads within the Plume Exposure Pathway EPZ, so they may be better used for evacuation and/or emergency vehicles. Access control also provides a means of maintaining security for areas that have been evacuated or sheltered.

ESF#13 - Law Enforcement and Public Safety and ESF#1Transportation will implement access control. Law enforcement personnel are assigned to pre-selected access control points (ACPs) for each Plume Exposure Pathway EPZ. The ACPs for the VY EPZ are established and shown in the VY Traffic Management Manual (TMM). The pre-selected ACPs for SS Plume Exposure Pathway EPZ are shown in the SS Traffic Management Manual (TMM). Both are held by ESF#1 – Transportation and ESF#13 – Law Enforcement and Public Safety. If necessary, this planning can serve as the basis for controlling access to sub-areas within the Plume Exposure Pathway EPZ, or to larger areas beyond the boundaries of the Plume Exposure Pathway EPZ. The locations of these ACPs and instructions for operating them are outlined in State Police procedures and the appropriate Traffic Management Manuals (TMM).

Before and during the early stages of the emergency, the purpose of the traffic/access control is to facilitate the movement of vehicles and to discourage nonessential personnel from entering the area. However, at this time, no attempt will be made to prohibit traffic from entering the Plume Exposure Pathway EPZ. This policy ensures that residents are allowed to return home to prepare to shelter and/or evacuate. During the latter stages of an evacuation, nonessential persons are denied entry to the controlled area. Access by transient (tourist, commercial, etc.) traffic will be prohibited. At this time, only authorized individuals who have been issued an exclusionary pass and proper dosimetry will be allowed entry:

- Federal, state and local officials with proper agency identification
- Emergency response vehicles with specific missions and destinations (i.e. busses, ambulances, tow trucks)
- Members of the press with press credentials (unless otherwise specified)
- Employees of the utilities responding to the plant, who have appropriate identification; and
- Residents with appropriate identification (e.g. drivers licenses) returning to their homes to prepare to evacuate.

Restrictions on traffic may also be instituted and handled by ESF#13 or other law enforcement personnel in the case of HAB incidents allowing for the securing of an identified area. TCP/ACP staff will be kept updated on emergency response activities by the ESF#13 or ESF#1 desk in the SEOC or, in the case of local control points, by their local EOC.

V. Protective Response for Exposure to Deposited Radioactive Materials

A. Protective Action Guides for Exposure to Deposited Radioactive Materials

After releases of radiological materials have been brought under control, it may be necessary to relocate the public from areas where extensive deposition of radioactive materials has occurred. The EPA has developed PAGs for radiological emergency response planning for direct exposure to deposited radiological materials. These guides are published in the *PAG Manual of Protective Action Guides and Planning Guidance for Radiological Incidents.* The PAGs are the projected sum of the effective dose equivalent from external gamma radiation and the committed effective dose equivalent from inhalation of re-suspended materials. These guides are listed in Protective Action Guides (PAGs) for Deposited Radioactivity, Figure 11-5. These guides are defined in terms of the projected dose that would occur if no protective actions were taken. Doses received from other pathways (i.e., plume or ingestion pathways) need not be considered when using these PAGs. The PAG doses for emergency workers during this phase are normal occupational limits.

B. Protective Actions for Exposure to Deposited Radioactive Materials

The PAGs for relocation are used to establish the boundary of a Restricted Zone within an area that has been subjected to deposition of radioactive material. Establishing the boundary of Restricted Zone may result in the following types of action:

- Persons who have already been evacuated from an area which is now designated as a Restricted Zone must be converted to relocation status.
- Persons not previously evacuated who reside inside the Restricted Zone must relocate
- Persons who normally reside outside the Restricted Zone, but were previously evacuated, may return.

At the time the Restricted Zone is established, a temporary buffer zone may also be needed established outside portions of the Restricted Zone in which occupants will not be allowed to return until monitoring confirms the stability of deposited contamination. Such buffer zones would be near highly contaminated areas in the Restricted Zone where deposited radioactive material might be re-suspended and then re-deposited outside the Restricted Zone. Similarly, a buffer zone encompassing the most highly contaminated areas in which persons are allowed to reside may be needed. Decision makers will be the Unified Command in consult with the Accident Assessment/RadHealth experts.

Protective Action Guides (PAGs) for Deposited Radioactivity **Figure 11-5**

Condition	Geiger Counter Shielded Window Reading	Recommended Action
<2 rem (first year)	Apply simple dose reduction techniques (1)	These protective actions should be taken to reduce doses to as low as practicable levels.
>= 2 rem (first year)	Relocate the general population (2)	Beta dose to skin may be up to 50 times higher.
>= 0.5 rem (any year after first)	Apply simple dose reduction techniques (3)	Consider relocation if decontamination is impractical.
>= 5 rem (cumulative over 50 years)	Apply simple dose reduction techniques (3)	Consider relocation if decontamination is impractical.

1. Simple dose reduction techniques include scrubbing and/or flushing hard surfaces, soaking or plowing soil, minor removal of soil from spots where radioactive materials have concentrated, and spending more time than usual indoors or in other low exposure rate areas.

2. Persons previously evacuated from areas outside the relocation zone defined by this PAG may return to occupy their residences. Cases involving relocation of persons at high risk from such action (e.g., patients under intensive care) should be evaluated individually.

3. The projected sum of the effective dose equivalent from external dose equivalent from external gamma radiation and the committed effective dose equivalent from inhalation of resuspended materials, from exposure or intake. Projected dose means the dose that would be received in the absence of shielding from structures or the application of dose reduction techniques.

1. Protective Action Guides for Indirect Exposure Within the Ingestion Exposure Pathway EPZ

The Food and Drug Administration (FDA) of the U.S. Department of Health and Human Services has developed PAGs for use in protecting the public from radiation exposure via the Ingestion Exposure Pathway (47 FR 47073).

The FDA and FEMA have provided Derived Intervention Levels (DILs) for radionuclides on pasture, in milk, in water, and in foodstuffs. The DILs represent a concentration of radioactive material that would result in a dose equivalent to the PAG. Of special importance is contamination of milk, either directly, or through the pasture-animal-milk pathway. The PAGs have been developed for whole body and thyroid exposures. Whole-body exposure guides include consideration of the effects of radiation on bone marrow, other organs and inhalation. As with the PAGs established for direct exposure, these PAGs are defined in terms of the projected dose that would occur if no protective action were taken in response to a release from a radioactive source. No consideration of prior doses is taken into account. These PAGs are listed below.

PAGs FOR INGESTION EXPOSURE PATHWAY

(Measured dose in rems)

	TEDE	Thyroid
Derived Intervention Level (DIL)	5	15

(Reference: 47 FR 47073)

2. Protective Actions for Indirect Exposure Within the Ingestion Exposure Pathway EPZ

Protective actions for indirect exposure are designed to minimize opportunities for the human consumption of radioactive material. The following protective actions are included in this category.

a. Milk Control

Preventing contamination of milk is an important element of the Ingestion Exposure Pathway protective actions. Actions for controlling consumption of contaminated milk are: Protecting animal feed and ordering dairy farmers to use only stored feed rather than letting the herd graze on contaminated pasture. Grazing animals should be sheltered and fed only stored feed.

In New Hampshire, contamination of dairy feed is not likely to be a significant problem, since 75-80% of all feed is stored. Most silos are filled for the year, and reduced daily according to need. Horizontal silos use plastic or other coverings and are becoming the dominant method of feed storage. The second action involves condemning and destroying milk supplies to prevent distribution to the market.

Control of milk will be ordered, as necessary, by RadHealth, and implemented by the NH Department of Agriculture, Markets & Food by direct contact with the dairy farm owners/operators. The Department of Agriculture, Markets & Food maintains lists of all commercial dairy operations in the State of New Hampshire. (ESF#11 – Agriculture, Natural and Cultural Resources).

b. Water Control

Water supplies that receive a major portion of their water from the surrounding watershed will be the focus of protective actions for water control. The soil may have been contaminated and run-off may concentrate radioactive materials in the water supply. Reservoirs that are filled by pumping from flowing streams can be protected by prohibiting pumping when run-off causes an increase in contamination. As necessary, RadHealth will ask the NH Department of Environmental Services (ESF#3 – Public Works and Engineering) to collect the water from potentially contaminated public surface water supplies within the Ingestion Exposure Pathway EPZs. Wells and groundwater sources are not likely to be contaminated but will be checked if they are muddy or otherwise suspected of having received run-off from contaminated soils. If sampling reveals the need, control of surface water supplies will be implemented by the department through direct contact with the water supply owner/operators. The department maintains a list of all public water supplies in New Hampshire.

c. Food Control

Field and orchard crops or other foods may be contaminated by deposition from the radioactive plume. Lists of the commercial agricultural facilities in Ingestion Exposure Pathway EPZs are maintained by the Department of Agriculture, Markets & Food (ESF#11).

EPI messages and/or news advisories will contain information relative to protective actions to be taken for the disposition of crops by the general public who have gardens or orchards.

If sampling reveals the need, RadHealth will order, and the Fish and Game Department (ESF#10 – Hazardous Materials) will implement, control of harvesting and sale of shellfish, and if necessary, will order the condemnation of contaminated shellfish. These protective actions will be implemented by direct contact with the commercial fisheries and producers. Lists of the commercial fisheries in the Ingestion Exposure Pathway EPZ are maintained by the Fish and Game Department.

The above protective actions are for use during an emergency. Deposition of particulates on the ground, pavement, and other surfaces may increase background levels and contaminate soil. The long-term effects of this increase in background levels will be monitored and actions taken, as appropriate.

Maps for recording Ingestion Exposure Pathway critical data, including locations of key land use, agricultural facilities, water supply location and related information, are kept at the state and local EOCs. These maps, which are too large to be included in the plan proper, are suitable for use in identifying areas and facilities where protective actions may be necessary and for recording survey and monitoring data. ESF#2 will provide mapping services through E-911 as the SEOC is activated.

VII. Surface Contamination Control

Contaminated areas can be expected if aerosols or particulate radioactive materials are released during an accident. The following guidance for surface contamination control, contamination limits, monitoring, and decontamination will be used: (Based on *EPA Manual of Protective Action Guides and Planning Guidance for Radiological Incidents.*

- Do not delay urgent medical care for decontamination efforts or for time-consuming protection of attendants.
- Do not waste effort attempting to contain contaminated wash water.
- Do not allow monitoring or decontamination to delay evacuation from high or potentially high exposure rate areas.
- After plume passage, it may be necessary to establish contamination monitoring stations in areas not qualifying as low background areas. (Figure 11-6 and 11-7 provide guidance)
- Encourage evacuees who do not go to a reception center for monitoring and/or decontamination, but who were in specified areas at specified times (based upon the location of the plume) to bathe, change clothes, wash clothes, and wash exposed surfaces of their vehicles and to then report to a reception center for monitoring. The contamination limit used at a reception center is 300 cpm (above background), with a CDV-700 or equivalent count rate survey instrument with the beta window open.
- After the Restricted Zone is established, individuals should be advised to bathe and change clothes as soon as possible and to report to a reception center or other facility for monitoring. Contaminated inanimate objects may be retained in the Restricted Zone for subsequent disposition.

VIII. Supplementary Protective Action: KI for the General Public

A supplementary protective action is by definition an action that may be taken to attempt to further mitigate the effects of a hazard for which a protective action has already been recommended. The ingestion of KI by members of the general public as taken in the context of this Annex is a supplementary protective action. The State of New Hampshire has elected to pre-distribute KI to interested members of the general public. Members of the public who live, work, or go to school in either the Seabrook or Vermont Yankee EPZ may apply for a free KI tablet. The pre-distribution of KI is ongoing. Application forms are included in the Emergency Planning Calendar, available at the town halls in each EPZ municipality, or available online at the DPHS website.

In the event of an emergency the public will be notified via an EAS/EPI message that emergency workers have been authorized to take KI in a particular area of the affected EPZ. The message will advise members of the public who are still in this affected area that they should continue to evacuate or shelter-in-place (if recommended) and if they have KI with them they should consider taking it, if they have not already done so. Based upon the development of a specific radiological emergency, requests for KI from affected members of the general public who do not already have it, KI can be made available at reception centers or other locations, using the capabilities of the Strategic National Stockpile plan, or other New Hampshire-based support plans.

Surface Contamination Screening Levels for Emergency Screening of Persons and Other Surfaces at Screening or Monitoring Stations in HIGH Background Radiation Areas (0.1 mR/Hr. to 5 mR/Hr. Gamma Exposure)

Figure 11-6

Condition	Geiger Counter Shielded Window Reading	Recommended Action
Before decontamination	<300 cpm over background and <0.5mR/hr	Unconditional Release
	>300 cpm over background or <0.5mR/hr	Decontaminate. Equipment may be stored or disposed of as appropriate
After decontamination	<300 cpm over background and < 0.5 mR/hr	Unconditional release
	>300 cpm over background or <0.5 mR/hr	Continue to decontaminate or refer to low background monitoring and decon station. Equipment may also be stored for decay and disposed of as appropriate.

Surface Contamination Screening Levels for Emergency Screening of Persons and Other Surfaces at Screening or Monitoring Stations in LOW Background Radiation Areas. (<0.1 mR/Hr. Gamma Exposure Rate)

Figure 11-7

Condition	Geiger Counter Thin Window Reading (All over background)	Recommended Action
Before decontamination	<300 cpm	Unconditional release
	>300 cpm	Decontaminate
After simple decontamination effort	<300 cpm	Unconditional release
	>300 cpm	Full decontamination
After full decontamination	<300 cpm	Unconditional release
	>300 cpm	Continue to decontaminate persons
	<0.5 mR/hr	Release animals and equipment
After additional full decontamination effort	<300 cpm	Unconditional full release
	>300 cpm	Send persons for special evaluation
	<0.5 mR/hr	Release animals and equipment
	>0.5 mR/hr	Refer or use informed judgment on further control of animals and equipment

IX. Disaster Initiated Review & Preliminary Capabilities Assessment

FEMA, Radiological Emergency Preparedness Program has primary responsibility to continually assess the status of offsite emergency preparedness (EP), and to issue a "Statement of Reasonable Assurance" that the State and local governments' emergency plans can be implemented in a manner to ensure the public health and safety in the event of a disaster (natural or man-made) at a NRC licensed reactor facility. Conference call between all involved parties (FEMA, NRC, Licensee, State, Locals) are encouraged. Based upon information acquired from any involved party on damages sustained or security issues, the REP Program HQ Branch Chief, in consultation with the RAC Chair will make a determination on the need for a Disaster Initiated Review (DIR).

In most instances, a Preliminary Capabilities Assessment (PCA) will be requested with the purpose of obtaining a prompt assessment (snapshot) of offsite EP capabilities immediately following a disaster situation. Standard Operating Guidelines (SOG) have been developed and should be instituted upon request. FEMA may elect to perform a PCA or DIR whether the NPP is operating or in shutdown mode. If FEMA's review indicates a finding the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological event , and the NPP continues to operate, then such a finding would be handled by the NRC under 10 CFR 50.54 (s) (2) & (3).

The PCA should include these questions:

- Has a State or local emergency been declared?
- Are emergency response facilities damaged, compromised or lacking power?
- Is the Emergency Response Organization unavailable?
- Are facilities for people with disabilities and access/functional needs impacted?
- Are Alert and Notification Systems inoperable?
- Are evacuation routes impeded?
- Are Support Facilities unavailable?
- Have compensatory measures been put in place by the State or local governments or the licensee?
- What is the initial assessment of the infrastructure for the Facility, State and local risk communities?
- Are the EPZ and State capable of implementing the protective actions>

If based on the PCA, the answer to any of the above questions creates concern, then consideration needs to be given as to wheter predetermined backup means are available or adequate compensatory measures have been established that can adequately compensate for the offsite function(s) that have been impacted.

If the status of the offsite emergency preparedness is inadequate, it is imperative that appropriate compensatory measures are developed and implemented to ensure public health and safety. These compensatory measures may be the responsibility of the ORO or the licensee.

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Chapter 12 - MEDICAL AND PUBLIC HEALTH SUPPORT

I. General

This Chapter describes the arrangements that have been made for medical services for radiologically contaminated individuals. This Chapter includes provisions for emergency care and transportation of victims of accidents, sudden illness and medically incapacitated persons among the population affected by evacuation and relocation during a radiological emergency. Mobile medical facilities include aid camps, triage stations, and other temporary medical care locations used for response.

Personnel from ESF#8 – Health & Medical will coordinate the delivery of medical support services to victims of radiological accidents.

II. Medical Support

A radiological emergency at a nuclear power plant can present actual or potential radiological health hazards to individuals within the affected area. It is imperative that capabilities exist for treating contaminated or acutely irradiated individuals. An on-going capability for emergency medical care and transportation of victims of accidents and sudden illness and access/functional needs populations during evacuation must also exist.

Coordination of the delivery of medical and health services for victims of radiological emergencies is the responsibility of DHHS as the lead agency for ESF#8 – Health and Medical. DHHS, Division of Public Health Services will coordinate with medical and health facilities, support agencies, local officials and dispatch centers and emergency transport services in those areas of the State potentially affected by radiological emergencies. Communications between local officials, dispatch centers, local hospitals and ambulance services will be performed via local emergency medical services communication systems. All acute care hospitals in the state are accessible by radio to NH licensed ambulances on the Hospital Emergency Administrative Radio (HEAR) System.

ESF#8 – Health and Medical will be responsible for annually updating the list of medical and health facilities that have the capability to treat radiological contaminated or acutely irradiated individuals. The lists will include the name, location, type of facility, capacity, and any special radiological medical treatments, capacity and capabilities.

III. Hospitals and Ambulance Services

A. Ambulance Services

1. Resources and Capabilities

Emergency medical services are provided by ambulance services operated by local government or private organizations. Services within the jurisdiction of local dispatch centers are coordinated by those dispatch centers. During an emergency response, services outside the local dispatch area will be acquired for evacuation functions by the Emergency Medical Services (EMS) Coordinator through ESF#1 – Transportation at the SEOC or through ESF#7, Resource Support. The SEOC, EMS Coordinator will monitor ambulance status, anticipate need for additional units, and arrange for further resources as needed and requested. EMS also maintains a list of available ambulance services that include New Hampshire and all out-of-state services licensed in New Hampshire.

Each ambulance operator and attendant in NH is required to complete an approved emergency medical care course. Material on the care and handling of radiation accident patients is included in the classroom instruction. In addition, RERP-specific training is offered to the services in accordance with RERP Training.

Bus conversion kits are used to supplement ambulance resources, if needed. In addition, to these capabilities, the NH National Guard has emergency medical vehicles that may be used during an emergency response if the emergency medical services are insufficient or not available in a timely manner. Other vehicles may be used if they are closer, or if other ambulance services are engaged in medical emergencies elsewhere in the State.

Non-emergency medical transportation (i.e. evacuation) of mobility-impaired persons from within the Plume Exposure Pathway Emergency Planning Zone (EPZ) will be coordinated with local municipalities in cooperation with the EMS Coordinator at the SEOC. Ambulance providers from outside the EPZ will perform this function. ESF#7 (Resource Support) will maintain all MOUs/LOAs and emergency contracts for specialized and general transportation and needed assets.

Reception centers in host communities will be supported by local emergency medical services for medical emergencies. DPHS provides medical referral services in the reception centers and ESF#1 – Transportation (EMS) coordinates the use of ambulances to evacuate non-ambulatory individuals requiring ambulance assistance from the EPZ in coordination with ESF#8 – Health & Medical.

a. Dispatch Centers

All emergency medical calls from local governments are dispatched through a central dispatching point. In the majority of the VY EPZ, Southwestern NH District Fire Mutual Aid (SWNHDFMA) has this responsibility and in the SS EPZ, dispatching is done through Rockingham County Dispatch Center (RCDC). Cheshire County functions as a backup to SWNHDFMA and may assume primary dispatch responsibilities in a town upon request.

Ambulance crews are issued dosimeters 0-200 mR, 0-20 R, and a thermoluminescent dosimeter (TLD) at the respective staging areas. If the ambulance service that normally serves an area is not available, the local dispatch center contacts the next closest ambulance. Thus, the local dispatch center coordinates all mobile medical units within the Plume Exposure Pathway EPZ and from nearby municipalities.

B. MS-1 Hospital Treatment Facilities

Individuals having or suspected of having any of the following conditions may require treatment at a medical facility:

- External contamination and injured
- Internal contamination
- High exposure to radiation

Hospitals which can provide medical services to such individuals are designated as MS-1.

- VY MS-1 Hospitals: Cheshire Medical Center, Keene
- SS MS-1 Hospitals: Elliot Hospital, Manchester and Wentworth-Douglass, Dover

A list of other medical facilities in N.H. capable of treating individuals with radiological complications is maintained by ESF#8 – Health and Medical. Referral of an individual to any of these facilities for treatment is made at the discretion of the DPHS Director (or designee) in consultation with a medical physician, as appropriate.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires that emergency patient care be guided by written policies and procedures. One of these policies addresses the emergency management of individuals with external contamination and injuries, individuals who have received high doses of radiation, or individuals with internal contamination. Care of these individuals may involve radioactivity monitoring or measurement; special preparation of space for patient evaluation including discontinuation of the air circulation system to prevent the spread of contamination; decontamination of the patient through appropriate cleansing; and containment, labeling, and disposal of contaminated material. The facility official responsible for radiation safety should be notified in advance of the arrival of any exposed

patient so preparations can be made. Provisions are in place to assess these capabilities on a periodic basis through training and drills.

C. Onsite Procedures

No onsite emergency medical service is provided by the State. Both SS and VY have made separate arrangements for emergency medical services for onsite accidents and radiological exposure.

D. Consultants

RadHealth maintains liaison with many highly qualified radiologists, physicists, and other professionals in both the medical and academic fields as well as access to radiologists and health physicists in other states through the New England Radiological Health Compact. A key resource is the NH Radiation Advisory Committee, which is made up of radiologists and nuclear physicists. The Advisory Committee is appointed by the Governor, in accordance with RSA 125-F:6, and is required to serve as advisors to DPHS and its Radiological Health Program.

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Chapter 13 - RECOVERY AND RE-ENTRY

I. General

This Chapter establishes procedures to be followed for recovery and return operations when a radiological emergency has been brought under control and no further significant releases are anticipated. Decisions to relax protective measures which have been implemented in a nuclear power plant emergency will be based on an evaluation of radioactive exposure levels which exist at the time of consideration and on the projected long-term exposure which may result in dose commitments to residents and transients in the affected area.

II. Entry into Recovery/Re-Entry Phase

When it has been determined that plant conditions have stabilized or are improving with no chance of worsening and deposition is known, the Governor, in consultation with the Director of HSEM, or designee, and the DPHS Director shall direct recovery operations to begin.

Following the initiation of recovery operations by the Governor, the HSEM Director (or designee) will poll the heads of each of the appropriate ESFs within the SEOC to determine the requirements for access control, return and recovery. Items to be considered should include, but not be limited to, the following:

- Identifying areas to allow return
- Mobilizing necessary resources, staffing or personnel, and equipment
- Determining transportation and traffic control requirements
- Determining additional communication needs
- Determining from local officials whether all utilities are functioning, food and water supplies are adequate, and that the evacuation effects on public health and sanitation are mitigated
- Determining the need for public announcements
- Notification of the public at the reception centers/mass care shelters specifying areas where return is allowed
- Determining the need for federal assistance
- Determining security needs including police and fire protection
- Determining the availability and need of additional medical and psychological services
- Coordinating with appropriate adjacent states
- Decontamination of equipment and vehicles not previously processed
- Ingestion exposure pathway evaluations
- Determining presence of any “hot spots”

Positions established during emergency response will initially remain active during the recovery/re-entry phase. As the recovery/re-entry phase progresses, the Governor may allow selected positions of the offsite response organization (ORO) to return to their non-emergency mode of operation.

III. Recovery from Protective Actions

Radioactive particles may be deposited on an area which has been passed by the plume. The amount of this deposited material in the environment will decrease with time due to factors such as radioactive decay and weathering. The principal exposure pathways to the general public occupying the contaminated areas are external exposure to gamma radiation from the deposited radioactive material (groundshine) and internal exposure resulting from the inhalation of re-suspended materials or the ingestion of contaminated food and water. Groundshine is expected to provide the largest contribution to the dose.

As a temporary framework for the recovery efforts during which time long-term recovery goals are being formulated, areas in which protective actions have been ordered will be considered suitable for normal activity when the dose commitments to residents are less than the levels established by the Environmental Protection Agency (EPA). RadHealth will conduct radiological survey/sampling in affected areas to determine if those

guidelines are being exceeded. Survey/sampling will be in accordance with RadHealth procedures. RadHealth, will, in conjunction with HSEM, interpret the data and recommend action to the Governor. The New Hampshire ERO will be responsible for coordinating and implementing recovery and return activities.

IV. Recovery from Evacuation/Sheltering

Individuals who were evacuated or sheltered as a precautionary measure will be instructed to resume normal activity if the emergency conditions at the plant have stabilized without a release of radioactive material to the environment and the threat of one occurring no longer exists.

Under emergency conditions which result in a release of radioactive material to the environment, and prior to declaring a return to normal activity in an area in which evacuation or sheltering has been ordered, RadHealth monitoring teams will conduct the following post-plume radiological surveys:

- Gamma radiation measurements
- Beta/gamma radiation measurements
- Airborne contamination measurements
- Soil samples
- Water samples

V. Recovery from Food and Water Control

Restrictions on food and water will be lifted when RadHealth has determined that the levels of radioactive material found in food and water supplies have decreased below the PAGs for preventative actions established by the FDA. Individuals recovering from sheltering or evacuation will be asked to dispose of/not to eat foods from their gardens until they have been thoroughly washed (seasonal) if radiological surveys indicate particulate contamination. In addition, RadHealth sampling teams will collect special environmental samples which allow assessment of the ingestion exposure pathway. These ingestion exposure pathway samples may include but are not limited to the following:

- Fruit and vegetable samples
- Meat and meat product samples
- Shellfish samples
- Egg samples
- Fish and game
- Soil and vegetation samples
- Milk samples
- Drinking water samples
- Surface water samples
- Wipe samples

The food and environmental samples will be collected in accordance with the RadHealth Special Environmental Sampling Procedures (maintained under separate cover by DPHS). Sample analyses shall be performed at the New Hampshire DPHS Laboratories in accordance with RadHealth standard laboratory procedures. Additional laboratory facilities will be made available as required by circumstances through the New England Radiological Compact. Federal Radiological Monitoring and Assessment Center (FRMAC) will maintain their own labs. The data from the post-plume radiological surveys and environmental sample analyses will be evaluated against the criteria which have established for short-term recovery efforts in RadHealth procedures.

A. Decontamination

Surfaces contaminated by radioactive material will be decontaminated in accordance with the procedures established by RadHealth. If the need for decontamination is indicated by monitoring data, it will most likely involve washing equipment surfaces, vehicles, and paved areas. RadHealth is responsible for providing appropriate instructions for decontamination activities. State and local emergency workers will assist in determining what areas require decontamination.

VI. Total Population Exposure Estimates

The total population exposure is estimated by summing the population exposure calculated for the following four pathways:

- Exposure from the plume
- Exposure from ground deposited radioactive material
- Internal exposure from the ingestion of contaminated food products
- Internal exposure from inhalation

The total population exposure estimate will be calculated when necessary based upon emergency conditions. The total population exposure will be used to monitor health effects and prepare cost-benefit analyses, if appropriate, during the recovery process. This may include prediction of possible health care, mass care and access/functional needs resources as well as geographic distribution.

A. Exposure from the Plume

Projected exposure from the plume may be calculated using the PHAAP, METPAC, Raddose-V or other computer programs. This dose rate information is manually correlated with the population present in the plume area for each time interval to calculate population exposure for this pathway. Recommended protective actions are considered when determining the population distribution. As field monitoring exposure rate data and laboratory analysis results of air samples become available, this measured exposure data will be substituted for the projected exposure data.

B. Material Deposited on Ground

Exposure from radioactive material deposited on the ground is based on field measurements taken on soil samples. Doses are calculated for a one-year time interval from the date of release. Recommended re-entry times are considered in calculating population exposure for this pathway. This calculation includes external exposure from the ground plan (using 2 x background as a control point for calculating doses) and internal exposure from the inhalation of re-suspended materials.

C. Internal Exposure – Ingestion

Exposure from the ingestion of contaminated food products is based upon laboratory measurements taken on various food products. The concentration of radioactive material on food products such as leafy vegetables, produce, forage, etc., are input into the computer program INGEST or other comparable software program(s). This computes internal doses for a one, two and fifty year date of release. Recommended protective actions related to ingestion are considered in calculating population exposure for this pathway.

D. Internal Exposure – Inhalation

Exposure from airborne radioactive material deposited in the lung due to inhalation, followed by clearance to other regions of the body via various pathways (ref. International Commission on Radiological Protection ICRP-30 lung model), may be approximated from field measurements (e.g., field air samples) and refined with laboratory measurements on particulate filters and silver zeolite cartridges using plume modeling software such as RASCAL. Inhalation of deposited radioactive materials that are re-suspended may be projected entering the Air (Re-suspension) sample concentrations of those materials into the computer program INGEST or other comparable software program(s), which computes internal dose determinations for year 1 and year 2 from the date of release. Recommended protective actions related to inhalation are considered in calculating population exposure for this pathway. The total dose must be added to the Soil (Relocation) dose and compared to the year 1 relocation PAG and the year 2 dose limit.

V. Re-entry

Re-entry refers to workers or members of the public going into a restricted zone on a temporary basis under controlled conditions.

A. Restricted Zone

Once an area has been evacuated, it is considered to be a Restricted Zone, subject to protection by security forces (ESF#13 – Law Enforcement and Public Safety). The implementation of a specific access control boundary creates a Restricted Zone from which both transients and residents are prohibited and re-entry only in compliance with the procedures outlined below:

- Except as specified in State Police procedures, the general public will be prohibited from entry into an established Restricted Zone until approved by DPHS Director (or designee). Although the general public may be prohibited, individuals may need to re-enter for any one of a number of reasons, such as:
  - Recovery activities
  - Retrieval of property
  - Security patrol
  - Operation of vital services
  - Care and feeding of farm animals

- It may be necessary to decontaminate access ways to vital institutions and businesses/critical facilities in certain areas so that they can be occupied by adults either for living (e.g., institutions such as extended care facilities, prisons, and hospitals), for employment or for re-establishment of critical services. Compliance with New Hampshire occupational exposure limits will be required for such areas.

- Access to a Restricted Zone which has been established by RadHealth within the Plume Exposure Pathway EPZ shall be approved by the DPHS Director, or designee, on a "Need vs. Risk" basis.

- All persons permitted entry will be issued dosimetry and an Exclusion Area Pass which will be valid for a specific period of time, and only for the specific location where business will be conducted. Passes will be sequentially numbered and entered in the Exclusion Area Pass Log. The Radiological Exposure Control Clerk will coordinate issue of Exclusion Area Passes and dosimetry/KI.

- All persons with an Exclusion Area Pass will be logged in and out on the Access Control Log by a state emergency worker at the ACP. Information to be listed in the log includes the dates of entry and egress, as well as pass numbers and dosimetry readings.

- The only individuals who may be granted entry to a Restricted Zone without a Exclusion Area Pass are emergency workers on an emergency assignment. The emergency workers assigned to the task must have the required dosimeters and the capability for direct or indirect radio communications with the Radiological Exposure Control Clerk.

1. Emergency Workers

The following actions will be taken to facilitate the entry of workers who meet the above requirements. The emergency workers' supervisor will provide the Radiological Exposure Control Clerk with the names and current radiation exposure of the workers requiring entry, the emergency assignment and the location of the ACP the workers will use to enter the Restricted Zone. If approval for entry is obtained, the ACP will be notified to admit the emergency workers to the Restricted Zone. The emergency worker(s) will be notified of their assigned maximum permissible dosimeter reading. When leaving the Restricted Zone, the workers will notify the Radiological Exposure Control Clerk of their final dosimeter reading and the time they departed the exclusion area.

Persons entering the Restricted Zone more than once will be informed of their cumulative dose readings and prohibited from entry when the cumulative dose reaches 1 Rem. However, under special circumstances RadHealth may authorize up to the level allowed for emergency workers in accordance with Radiological Exposure Control Decision Criteria.

All persons leaving the Restricted Zone will be instructed to read their direct-reading dosimeters at the ACP and complete the Access Control Log. They will be directed to the Radiological Exposure Control Clerk for monitoring and turn in pass and dosimetry.

B. Cleanup Strategies

Strategies for the cleanup are determined as the situation is more fully understood by the communities and other stakeholders. Some factors to consider that have been identified by the EPA include:

- Areas impacted (e.g., size, location) relative to population.
- Actions already taken during early and intermediate phases.
- The ability of a remedy to maintain reliable protection of health and the environment over time.
- Assessing the performance of treatment technologies on the toxicity, mobility or volume of contaminants.
- The success or effectiveness of the cleanup or remediation as the contaminant removal progresses.
- Adverse impacts on health and environment that may be posed in the time it takes to implement the remedy and achieve community-based remediation goals.
- Impacts of alternative levels of clean up on local and regional economy and on residents' sense of place.
- Preservation of destruction of places of historical, national, or regional significance.
- Technical and administrative feasibility of the remedy, including the availability of materials and services needed to implement each component.
- Cost of each alternative, including estimated capital, operation and maintenance costs and net present value of those costs.
- State and local support for the remedy.
-

VII. Federal Assistance

It is the intention of the State of New Hampshire to make use of the Federal Radiological Monitoring and Assessment Center and FEMA capabilities when making determinations (FRMAC) as well as other appropriate resources available through the Federal network.

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Chapter 14 – EXERCISES AND DRILLS

I. General

Exercises and drills must be conducted periodically to evaluate the adequacy of the plan/annex and the skills of offsite emergency response organizations. Results of drills and exercises provide a basis for changes in the response plans, implementing procedures, and for future scheduled training. The exercise and training program will be Homeland Security Exercise & Evaluation Program (HSEEP) compliant and in line with the SEOP, the NRC, and as identified in FEMA's "*Program Manual, Radiological Emergency Preparedness, P-942,"*.(latest edition as wll as approved edits)

II. Communication Drills

The emergency communications systems to be used by the New Hampshire ORO are described in detail in Section 2.2 of this Incident Annex. The schedule of drills to test the emergency communications system is outlined in Figure 14-1, Schedule of Communications Drills. Drills shall include the aspect of understanding the content of the messages and include a message content check.

Much of the equipment used for emergency communication is used on a daily basis; therefore, the scheduled drills are more useful for testing the users and their procedures rather than the equipment. Only the Nuclear Alert System(NAS) and INForm are dedicated to emergency notification for the nuclear power plants. Communications systems are maintained and tested on a recurring basis throughout the assessment period and system status is available to all operators. Periodic test results and corrective actions are maintained on a real time basis.

Drills generally commence with the initial call from the nuclear facility to the State Warning Point (SP Communications). HSEM will advise both the SP, ESF#2 – Communications and Alerting and DPHS in advance when drills should include testing communications with other agencies and organizations that make up the State's ORO. Following a communication drill, ESF#2 will debrief the participants and determine whether communications equipment and notification procedures functioned properly. As necessary, HSEM in collaboration with ESF#2 – Communications and Alerting will direct remedial activity.

During evaluated exercises/drills the ORO must demonstrate that a primary system and at least one backup system is fully functional at all times. If communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed.

Schedule of Communication Drills Figure 14-1

LINK	SYSTEM	Monthly	Quarterly	Annually
A	Nuclear facility-SP Communications-NAS (Orange Phone)	**X**		
B	SP Communications – DPHS (Telephone, Pagers)		**X**	
C	SP Communications – HSEM (Telephone, Pagers, NAS Orange Phone)	**X**		
D	SP Communications – Local Dispatch (Telephone, SPOTS)	**X**		
E	DPHS – Nuclear Facility (Telephone)		**X**	
F	DPHS – HSEM (Telephone)		**X**	
G	HSEM – Governor (Telephone)	**X**		
H	HSEM – State ORO Agencies (Telephone/Pager)		**X**	
I	Local Dispatch – Local ERO (Local Dispatch Radio)	**X**		
J	HSEM – FEMA Region I, MERS Operations Center (MOC) (Telephone)		**X**	
K	HSEM/SP Communications – Radio Stations WOKQ/WKNE (Fax Machine, Dedicated Telephone)		**X**	

III. Medical Emergency Drills

A. MS-1 Hospitals

MS-1 hospitals provide medical services for the general public and emergency workers who are injured and/or contaminated. Drills of MS-1 hospitals are conducted biennially and generally Out-of-Sequence (OOS).

IV. Radiological Monitoring and Health Physics Drills

Radiological monitoring drills are conducted annually. The drills include the dispatch of RadHealth monitoring and sampling teams, communications between field teams and the emergency facility, and recordkeeping. Sampling teams are made up of representatives from ESF#8 – Health and Medical. Each drill will include collection and analysis of all sample media (e.g., water, vegetation, soil and air, and provisions for communications and recordkeeping. State drills do not need be at each site.

Health physics drills are conducted semi-annually for the DPHS and appropriate ESF#8 staff. These drills will involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment. State drills do not need to be at each site.

A. Reception Center

Reception center drills may be held out-of-sequence in conjunction with exercises at SS and VY. These drills will include activation of the facility, monitoring and decontamination of personnel, communications within the facility as well as recordkeeping.

V. Exercises

Exercises are generally classified into three major categories: Tabletop, Functional and Full Scale and use the HSEEP methodology. FEMA has also created a crosswalk relating to the Demonstration Criteria and Core Capabilities. (See REP Program Manual). The process of applying HSEEP methodology to REP exercises may involve the following steps:

- Scheduling REP Activities
- Conducting Pre-Planning Activities
- Holding Exercise Planning Meetings
- Developing REP Exercise Documents

- Conducting REP Exercises
- Documenting REP Exercises

Orientations/workshops may also be used as preliminary exercises to introduce participants to the plan and prepare for the exercise process. Each of these exercises varies in activities and resources. Some require simple preparedness and execution while others may be more complex and require greater efforts and resources. Each provide their own benefits and will be considered in the overall development of the State's exercise program, including those associated with this Incident Annex. (See SEOP). Prior to each exercise cycle an "Extent of Play" identifying those demonstration criteria to be exercised in the exercise cycle. The Extent of Play must be submitted to the FEMA Region prior to an exercise cycle. All major elements of the plans/procedures will be tested at a minimum at the frequency as specified by the REP Manual.

The exercises for both SS and VY shall demonstrate the key skills of the integrated N.H. response organization(s) to adequately respond to an incident scenario. The scenarios shall vary such that the major elements of emergency plans are exercised within an 8-year exercise cycle. Each scenario variation shall be demonstrated at least once during the 8-year exercise cycle and shall include, but not be limited to, the following:

a. Hostile action directed at the plant site involving the integration of offsite resources with onsite response;

b. An initial classification of or rapid escalation to a Site Area Emergency or General Emergency;

c. No radiological release or an unplanned minimal radiological release that requires the site to declare a Site Area Emergency, but does not require declaration of a General Emergency. For this scenario variation the following conditions shall apply:

i. The licensee is required to demonstrate the ability to respond to a no/minimal radiological release scenario at least once within the 8-year exercise cycle. State and local response organizations have the option

ii. When planning for a joint no/minimal radiological release exercise, affected State and local jurisdictions, the licensee, and FEMA will identify offsite capabilities that may still need to be evaluated and agree upon appropriate alternative evaluation methods to satisfy FEMA's biennial criteria requirements. Alternative evaluation methods that could be considered during the extent of play negotiations include expansion of the exercise scenario, out of sequence activities, plan reviews, staff assistance visits or other means as described in FEMA guidance.

iii. If the offsite organization elect not to participate in the licensee's required minimal or no-release exercise, they will still be obligated to meet the exercise requirements as specified in 44 CFR § 350.9.67.

Once every eight years, the State will exercise the SS Ingestion Exposure Pathway/Post Plume response plan in conjunction with an Full-Scale Exercise. When VY schedules Ingestion Exposure Pathway/Post Plume exercises (also every 8 years), the State will partially participate and will support the full participation of the local response personnel.

Within the HSEEP guidelines, an exercise design team made up of HSEM, FEMA, NRC, facility, local and ESF representation will be created with exercises that are intended to build on one another, each one becoming more complex and comprehensive.

A. Exercise Scenario

For each exercise, the nuclear facility in conjunction with HSEM and DPHS will prepare an offsite exercise scenario to be utilized in the NH portion of the EPZ. The scenario will be varied from exercise to exercise and will include all required scenario variations during the cycle to demonstrate all the major elements of the plan and preparedness of the State and Local OROs within a eight-year period. Certain actions may be simulated or demonstrated "out of sequence."

Scenario types and variables can enhance the realism brought to the exercise. There are several types of scenario variables:

- **Plume Exposure –** This type of scenario drives demonstration of capabilities to protect public health and safety within the 10-mile EPZ. In general the source term and resultant dose projections reach a sufficient magnitude and distance from the plant to drive the performance of the agreed upon demonstration criteria and extent of play.

- **Ingestion Pathway –** This type of scenario drives exercise play for all participating jurisdictions within the 50-mile EPZ. The scenario will need to ensure that the radioactive plume and consequent ground deposition affect the appropriate areas within these jurisdictions. (Once every eight [8] years.)

- **Relocation, Re-entry, and Return –** These scenarios incorporate simulated offsite radiological deposition that exceeds the relocation PAGs set forth in the affected jurisdiction's plan. For relocation activities, the projected dose is calculated for the first year, any subsequent year and 50 years. The deposition should include both short-lived and long-lived radionuclides, such as iodine and cesium, to prevent decision-makers from waiting out radionuclide decay to avoid relocation decisions. **FEMA recommends demonstrating ingestion exposure pathway, relocation, reentry, and return activities within the same exercise when possible because of the similar scenario requirements of exercise play.*

- **Hostile Actions against the Nuclear Power Plant –** This type of scenario is required at least once in every 8 year cycle. HAB incidents present unique challenges to both the plant and the offsite response organization. The response may involve agencies not normally involved in a REP exercise. The HAB scenario can coincide with either a release or no/minimal release. (consecutive HAB exercises at one plant may not include a no/minimal release). Methods of attack could be from an insider threat, ground, waterborne, or airborne or a combination. Simultaneous attacks or threats may be to other facilities at the regional or local level and impact the ORO's resource availability in response to an incident at the plant. Scenarios may also include equipment or component failures such as failure of a generator or emergency core cooling system pump, etc. forcing escalation in ECL or radiological release potential.

- **Initial classification of or rapid escalation (within 30 minutes) to a SAE or GE –** Scenarios need to employ this variable at least once during the eight year cycle. It is important that the scenario allows for all appropriate criteria to be demonstrated. Reaching the GE level may not be necessary depending upon procedures and actions for changing ECLs.

- **No release or unplanned minimal radiological release that requires a declaration of SAE but no GE –** Plants must use this variable at least once per eight year cycle. Although encouraged by FEMA, ORO are not required to participate in this type of exercise. If the ORO should participate, demonstration criteria needs to be identified that cannot be evaluated during the exercise and determining appropriate alternative demonstrations and evaluation venues that can meet the ORO's biennial evaluation requirements.

Scenarios should include, but will not be limited to, the following information:

1. Basic Objectives

Exercises shall include mobilization and implementation of State and local personnel and resources adequate to verify the capability and response to a radiological release within (plume) and beyond (ingestion pathway) the 10-mile EPZ. The State shall include procedures for making PADs and implementing protective actions based upon PAGs that are consistent with EPZ recommendations and the process for ensuring coordination of PADs with all applicable jurisdictions is identified as a basic objective for these exercises. These will be explained in terms of the response function/planning criteria (Exercise Evaluation Guidelines (EEGs) to be exercised and, to the greatest degree possible, the appropriate Core Capabilities.

In a Full Exercise (Functional or Full-Scale) the State will test all nine of the Emergency Response Functions which may be grouped under Core Capabilities..

- Emergency Operations Management
- Protective Action Decision Making
- Protective Action Implementation
- Field Measurements and Analyses
- Emergency Notification and Public Information
- Support Operation/Facilities

In limited exercises the State will, at a minimum, test notification methods with other criteria and functions tested as deemed necessary by HSEM and/or FEMA based on the results of previous drills and exercises as indicated in the After-Action/Improvement Plan (IP).

Participants will be apprised of the basic objectives for all workshops, table-top exercises (TTX), drills and exercises undertaken as part of the exercise cycle.

2. Dates, Time Period, Places and Participating Organizations

Dates and time periods described in the scenario will coincide with the scheduling agreed upon with the nuclear facility, with the other states in the EPZ, and with the NRC and FEMA. The exercise scenario will list the emergency facility and the organizations that will participate in the exercise. The full scale exercises will include the appropriate ESFs in the NH ORO (state and local) and each emergency facility associated with the power plant at which the accident/incident is simulated. In limited exercises HSEM (ESF#5 – Emergency Management), DPHS (ESF#8 – Health and Medical) and the ESF#2- Communications will participate, at a minimum. Some types of exercise scenarios (HAB) may include participation by agencies that do not normally participate in other type of REP exercises.

3. Simulated Events & Schedule of Real and Simulated Events

The schedule of events in the offsite scenario will be built around initiating events at the power plant. These will include escalation through the Emergency Classification Levels (ECLs). The scenario will include certain assumptions and sufficient offsite events and measurements to demonstrate the objectives of the exercise.

4. Narrative Summaries

A narrative summary describing the conduct of the exercises/drills to include such things as simulated casualties, offsite fire department assistance, rescue personnel, use of protective clothing, deployment of radiological monitoring teams, and public information activities.

5. Out of Sequence Exercises/Drills

The FEMA Region decides demonstration criteria that may be performed out of sequence. The biennial after action report includes out-of-sequence evaluations that are scheduled no more than sixty (60) days prior to or thirty (30) days after the biennial exercise. A separate AAR will document out-of-sequence evaluations scheduled outside the specified timeframe. All such exercises/drills should be discussed with and approved by the FEMA Region.

An Extent of Play Agreement is negotiated between the FEMA Region and the State (on behalf of the entire ORO) and identifies the Demonstration Criteria that will or will not be evaluated during the exercise cycle, the entities responsible for demonstrating specific criteria and facilities to be activated. A description of the arrangements for and advance materials to be provided to observers will also be included.

B. Participant Orientation

A Participant Orientation should be held prior to each drill/exercise and made available to all participants of the drill/exercises. Included in the orientation should be:

- Purpose, scope and objectives
- Introduction/Role of Evaluators
- Evaluation Areas
- Conduct of drill/exercise
- Scenario
- Phone numbers and other particulars
- Flow of Drill/Exercise
- Methods that will be used for AAR/IP

C. ExPlan Handbook

At the time of drill/exercise, each participant should be provided with an Explan (Participant Handbook) which identifies the scope and objectives, scene setting, evaluation areas and participant feedback form. This form should be collected by the evaluators at the end of each drill/exercise and utilized as part of the After-Action Report and Improvement Plan (IP).

VI. Exercise Control and Evaluation

A. Controller/Evaluator Briefing

A meeting/briefing should be held for the Lead Evaluator/Controller and the evaluators/controllers prior to each drill/exercise. Information covered in this briefing will include instructions regarding REP/HSEEP evaluation approach and address the applicable Demonstration Criteria/core capabilities to be evaluated/observed, the exercise scenario, timeline of significant events and documentation. A listing of all appropriate injects to be utilized during the exercise/drill will also be reviewed.

B. Controller/Evaluator Handbook

The Controller/Evaluator Handbook will include narrative summaries describing the conduct of the exercise, including schedule of real and simulated events, schedule of anticipated responses and the extent of play for each objective. The Controller/Evaluator Handbook will enable observers and evaluators to trace the course of the exercise and to be prepared to observe the emergency response activities at the critical milestones during the exercise.

Federal observers will be provided with the Controller/Evaluator Handbook, guidelines and evaluation sheets applicable to their location. The "Extent of Play" will also be provided to ensure Controllers and Evaluators are aware of any unique considerations in the demonstration criteria.

C. Non-Evaluated/Evaluated Briefing (Hot Wash) and Critique

A briefing should be conducted by the Lead Evaluator/Controller immediately following the conclusion of each non-evaluated drill or exercise. This provides the participants an opportunity to hear initial exercise results including strengths, areas for improvement, and potential issues. It also gives the ORO participants the opportunity to discuss the preliminary results of the exercise/drill so that everyone has a clear understanding of the issues and can provide their perspective. Controllers should provide written documentation of their observations within two (2) days of any exercise or drill.

D. Evaluated Exercise Comments

An exercise evaluation team will be established by the FEMA Region. Biennial exercises of the offsite response organization shall be evaluated and critiqued by FEMA evaluators in accordance with FEMA REP exercise methodology. HSEM will work with FEMA to schedule the placement of federal observers during drills and exercises. Additional HSEEP-qualified controllers and evaluators may be used to help support the exercises.

During evaluated exercises, evaluators make extensive notes on the exercise activity and comments on variations from expected outcomes. After the exercise, the observations are compiled into narratives that describe the capabilities demonstrated and any weaknesses in the organization's ability to carry out expected actions. An After Action Report/Improvement Plan (AAR/IP) captures observations from the exercise and includes recommendations for post-exercise improvement.

Following an evaluated exercise, the Regional Advisory Committee (RAC) Chair holds a meeting with selected individuals representing the evaluated ORO (Participant Briefing). At this meeting the RAC Chair reviews the offsite activities including a preliminary assessment of strengths and weaknesses of the demonstration. He/she may also discuss potential exercise issues not yet classified as Level I, II and/or Plan Issues. This meeting provides the ORO with a forum to discuss the preliminary exercise results so that can hear and respond to concerns from their perspective.

A public meeting conducted by the RAC Chair in accordance with 44 CFR§ 350.9(e). This may be held in conjunction with the Participant Briefing. Notice is published 7 days prior to the exercise date in the local newspaper with the largest circulation or other media (at the discretion of the Regional Administrator or designee). The RAC Chair will also invite representatives of the participating ORO(s), the NRC, and other Federal agencies. Members of the public and media may attend as observers. Classification of issues as Level I, II, Plan and Demonstrated Strengths are not done during this meeting.

An After Action Report (AAR) will be developed in draft form and sent to the State for review and comment within 30 calendar days of the exercise. All review and comment should focus on the accuracy of the data and information contained and overall quality of the report. The Improvement Plan is an outcome of the AAR and contains information on how OROs will correct or improve Level I, Level II and Plan Issues, who is responsible, and an anticipated timeline for correction/improvement. The content of the Improvement Plan will be negotiated during the AAM. FEMA will follow up with the OROs to ensure that IP corrective actions are met.

The FEMA Region will receive all the comments back no later than sixty (60) calendar days after the exercise. The FEMA Regional Administrator, or designee transmits an electronic copy of the cover letter of the report to the REPP HQ Branch Chief and the Regional Liaison Officer within 90 calendar days of the exercise. This will be the indication for the RLO to retrieve the finalized AAR and save it at Headquarters. An copy of the final AAR is provided by the RAC Chair to the State, NRC Hdqts. and Region and appropriate RAC members.

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The following items are also used by FEMA to capture the knowledge and experience gained from both positive and negative actions during demonstrations:

- **Demonstrated Strength:** an observed action, behavior, procedure, and/or practice that is worthy of special notice and recognition.
- **Best Practice:** an exemplary, peer-validated technique, procedure, good idea, or solution that works and is solidly grounded in actual operations, training and exercise experience.
- **Lesson Learned:** knowledge and eexperience, positive or negative, derived from actual incidents, as well as those derived from observations and historical study of operations, training and exercises.

These items will be passed on to State EROs by FEMA to assist in the strengthening and enhancing capacity in REP planning and procedures.

Chapter 15 - RADIOLOGICAL EMERGENCY RESPONSE TRAINING

I. General

The purpose of this Chapter is to identify the training program that will ensure that the radiological emergency response training mandated in *Nuclear Regulation – 0654* is offered for the emergency response personnel charged with decision-making, planning and response. As outlined in the SEOP, each agency is responsible for ensuring NIMS compliancy in response and response personnel..

II. Training Offered

Each organization within the ORO will ensure that response personnel are appropriately trained. All response/emergency response personnel that may be activated through mutual aid agreements (including fire, police, ambulance and rescue departments) shall also be provided opportunities to participate in the training. Training will also be coordinated by and offered (annually as a minimum) by HSEM to organizations that comprise the New Hampshire ORO. HSEM will be the agency charged to collect training records from the various sources to ensure accurate recording for the Annual Letter of Certification (ALC). HSEM-sponsored or requested training may be offered more frequently as needed if significant SEOP/Incident Annex changes are implemented, or if deficiencies or issues in the emergency response capabilities are identified. HSEM will maintain a course outline for the HSEM training programs. ORO partners are also strongly encouraged to take advantage of Federal and State offered courses dealing with radiological response and other relevant training areas. In the event of an incident or emergency, just-in-time training can/will be provided to responders/emergency workers within the affected EPZ by the State or local EPZ/Host community. Each ORO response organization will establish a training program for instructing and qualifying personnel who will be responsible for implementing radiological emergency response plans. All training/re-training should be offered at least annually. Concepts covered in various training may include:

- Notification Methods and Procedures
- Emergency Communications Systems
- Public Information
- Emergency Facilities and Equipment
- Accident Assessment
- Protective Response
- Radiological Exposure Control
- Medical and Public Health Support
- Recovery and Re-entry

The specialized initial training and periodic retraining shall be provided in the following categories of audiences:

A. Directors or Coordinators of a Response Organization (State/Local)

This section reviews the State and Local ORO, highlighting the roles and responsibilities of the ORO agencies/organizations within the plan, how the REP Incident Annex fits into the State/local all-hazards emergency operations plans, NIMS compliancy, the role and location of various facilities and the inclusion/role of federal partners in the overall response. The overall purpose of the radiological response program is discussed along with the emergency response criteria, 24-hour capabilities and the regulatory basis of the program. A section on public notification will include an explanation of special facility notification, the Public Alert and Notification System (PANS), Emergency Alert System (EAS), Emergency Public Information (EPI) announcements, and the public information materials. Acquaintance with position procedures and some of the terms used, including ECLs and EPZs are also discussed. State agency personnel with responsibilities requiring additional training may be scheduled for the supplemental sessions.

B. Accident Assessment Team Training

At least annually, DPHS will conduct accident assessment training for the individuals that it will use for dose calculation and projection work. Accident Assessment staff that will be used for assignments in the SEOC and other facilities will be included in the training. The training will cover the decision processes outlined previously and the predictive techniques contained in the DPHS/RadHealth Standard Operating Procedures.

Accident assessment training provided by DPHS/RadHealth will be supplemented by training provided by the Seabrook Station (SS) and Vermont Yankee (VY) plant operators, as appropriate. As schedules permit, staff and volunteers will attend onsite training sessions at the plant sites.

C. Radiological Monitoring and Analysis Team Training

DPHS/RadHealth will conduct annual training for the monitoring and analysis teams. This training will include familiarization with and use of the instrumentation available in each of the field monitoring and sampling kits. In addition, the training will include familiarization with procedures for mobilization and dispatching field teams, locations of monitoring sites in each EPZ, and procedures for communicating and dispatching field samples. The utilities will include ORO team members in training provided to the plant monitoring teams as necessary. This training will be used to supplement the training provided by DPHS/RadHealth. The training will be scheduled to precede the periodic drills and exercises to provide a means of verifying the adequacy of the training.

D. Police, Security and Firefighting Personnel Training

State responsibility in this area is limited to access control functions as well as Incident Command Post (ICP) coordination and other HAB-related activities. HSEM will offer training to State & local Police, security and firefighters, National Guard and Department of Transportation personnel on response activities (based on type of incident). Special trainings may be set up to help facilitate just-in-time training and use of mutual aid personnel. The instruction will include EPZ locations and boundaries, role of law enforcement and security in an Incident Command Post and off-site locations during a HAB event, locations of access control points, and procedures for manning traffic/access control points. In addition, those that may be called upon to respond to requests for police and security support within an EPZ will be given basic radiological exposure control instruction.

Generally, no state agency is responsible for providing onsite police, security, or fire fighting support. These functions will be provided by plant-designated personnel except when requested to do so. Training of these people will be handled by the plant directly. Components of the training will also include access onto and off the plants' perimeter and facilities.

E. Medical Support and First Aid/Rescue Personnel/Teams Training

The Bureau of Emergency Medical Services (EMS) will assist in the coordination of training for emergency workers with medical support and rescue responsibilities. To support mutual aid agreements, training will be provided to the entire EMS region in which the EPZ communities are located as well as curriculum for just-in-time training. The training will include an overview of the RERP, ECLs, notification, first aid, and protective actions with an emphasis on evacuation concepts. EMS instruction will also include basic radiological exposure control for emergency workers. The training will also include the role and activities of the MS-1 hospitals. Hospital personnel involved with handling injuries and radiological contamination will also rely upon their own in-house or associated medical training. Procedures and activities utilized as part of the medical/rescue response may be contained in appropriate sections of facilities' emergency plan.

F. Notification and Communication Personnel Training

HSEM, ESF#2 or local/regional dispatch centers will offer annual instruction to those personnel that have key roles in notification and emergency communication. These people include the supervisors and dispatchers at the

State Police Communications Center, Southwestern New Hampshire District Fire Mutual Aid (SWNHDFMA), the Rockingham County Dispatch Center (RCDC), local dispatch centers, and representatives of EAS stations and EPI outlets of each EPZ. Instruction will include discussion of notification procedures and messages, emergency communication equipment and facilities, and EPI. Instruction will also cover descriptions of EPZ locations, ECLs and an overview of the RERP. SEOC PIOs and other individuals responsible for the development of EPI messaging should also be invited to attend. Any agencies and individuals with responsibility for activation of the PANS will receive training on the procedures for use of the system. The training will be evaluated based upon the performance of the agencies responsible for communications during subsequent communications drills.

G. Reception Center and Support Personnel Training

HSEM, DPHS/RadHealth, DHHS, Dept. of Agriculture and host community personnel will offer training at least annually for emergency workers responsible for radiological monitoring and decontamination of personnel and other support services at a reception center. These trainings may occur concurrently or independently. The training will include an overview of emergency planning concepts, such as the ORO, EPZs, ECLs, emergency facilities, notification, and protective response. Basic radiation concepts, radiological exposure control, and use of dosimetry will also be covered. Practical demonstration and exercise of the skills used in a reception center will also be included. Other topics include activation and management of the facility, use of protective clothing, survey methods for personnel and vehicles, and decontamination procedures.

H. Other Training for Support and Response Personnel

HSEM and other federal, state, local and private sector partners may also annually offer training appropriate to enhance the education, knowledge, skill and capacity of the personnel assigned to emergency response, planning, recovery and mitigation during an emergency/incident at a nuclear power plant.

Such instruction offered may include personnel who staff transportation staging areas, the drivers of bus and ambulance transportation resources designated for use during an evacuation and the towing companies under agreement to remove road impediments during an evacuation. Such training will include an overview of the RERP and ORO, notification, ECLs, protective actions, location of staging areas, transportation provider garages, basic radiation concepts, and radiological exposure control, including the use of dosimeters.

I. Training Areas

Attendance will be taken at all training sessions. The attendance forms will be forwarded to HSEM as a permanent record of the availability and attendance at required training. Attendance at programs and seminars should be made available to HSEM to ensure personnel remain aware of current industry standards as related to emergency preparedness and receive credit for such training.

Since the REP Program is grounded in an all-hazard environment, generalized emergency management training is also considered valuable and appropriate. Training may be taken on-line or in a classroom setting. All emergency response personnel are highly encouraged to take National Incident Management System (NIMS) and Incident Command System (ICS) Training. Areas covered in REP Training include:

1. Notification

This section details the sequences by which the response organizations and the general public are notified of an emergency. Notification of the response organization identifies the links in the notification chain, the 24-hour capability, and the primary and back-up means of communicating. .

2. Protective Actions

This segment explains the purpose and implementation of protective actions. The definition of protective actions precedes a brief overview of the decision-making process on which a Protective Action Recommendation (PAR) is based and the options available (access control, sheltering, evacuation,

relocation, and food, water, milk and livestock feed control). Parallel actions and concepts associated with the implementation of protective actions are also described. Particular attention is given to evacuation support concepts such as traffic control, access control, transportation resources, and reception center and mass care center services. The decision-making process involved in entering the recovery stage is discussed, as well as factors to be considered in re-entry.

3. Radiation Concepts

This section provides an understanding of the hazards associated with radiation. A brief overview of nuclear power plant operations explains how fission heat is used to generate electricity and identifies the structures designed to contain radioactive materials. The characteristics of the types of ionizing radiation are described as well as the methods used to avoid or minimize exposure.

4. Radiological Exposure Control

This section defines terminology, the limits of exposure received by emergency workers and the use of dosimetry. Some of terms defined are: exposure, contamination, dose, rem and Roentgen. The EPA Protective Action Guides (PAGs) are discussed along with the State's limits on emergency worker exposure. The procedure for obtaining authorization to exceed those limits is explained. The presentation on the use of dosimeters identifies the type issued to each emergency worker, a description of how each is read, the procedure for obtaining the equipment, and how to complete the exposure record form. The conditions for the use of KI will also be discussed.

5. EOC Operations

This section reviews the responsibilities of the EOC staff as a whole and individually. The reporting chains and functions requiring coordination between the EOC representatives or between the state, local and private organizations are examined. Internal communications and recordkeeping are emphasized. This includes the use of maps, status boards, maintenance of logs, use of the data-base management software, etc. Procedures for maintaining EOC security are also covered.

6. Traffic Management

This program introduces the basis and development of the traffic management strategy and the use of the *Traffic Management Manual.* Equipment for controlling traffic is identified. Provided are examples of traffic control diagrams and police chief procedures on establishment of traffic control points (TCPs) and access control points (ACPs). Those agencies and organizations with responsibility for ESF#1 – Transportation (traffic and access control) will be charged with responsibility for these activities in concert with local officials.

7. Operation of Public Alert and Notification System

This training provides an overview of the complete public notification system and a description of each component. Detailed instructions are given on various activation commands such as siren activation, individual sirens, or beach sirens.

8. Radiological Monitoring Equipment and Exposure Records

This program is offered for the radiological officer in a response facility. Topics include the inventory and operational check of equipment, procedures for reporting equipment deficiencies, issuing dosimetry and KI, use of forms for maintaining exposure records, procedure for receiving authorization for an emergency worker to exceed exposure limits, and technique of personnel monitoring.

9. Reception Center Operations

Various aspects of the reception center are discussed including the responsibilities of each member in the organization; coordination between the reception center, decontamination operations, host community EOC, Incident Field Office (IFO), and State EOC; and forms and procedures used in the registration, student pick-up, message center, and mass care assignment areas. Internal communications and record keeping are emphasized.

This phase of training demonstrates and exercises the skills used in the monitoring/decontamination operations, including activation of the facility, use of protective clothing, survey methods for personnel and vehicles, and decontamination procedures. Also reviewed is the relationship between the monitoring/decontamination operations at the reception center, the host community EOC, and the State EOC.

10. Transportation Staging Area Operations

The topics covered in this session include a description of the flow of information from town requests to the transportation staging area, the responsibilities/roles of the staging area organization, review of the facility layout, communications between command post and staging area entrance and exit, use of forms for logging and dispatching vehicles; and procedures for issuing dosimeters and exposure records.

11. Accident Assessment

Training will focus on methods to calculate current and projected doses and the area impacted by the plume. Instructions are provided on the use of dose assessment computer programs such as PHAAP, METPAC, RASCAL and Raddose-V. Exposure Control and Radiological Screening programs are described.

12. Radiological Monitoring and Analysis

This training consists of a review of the procedures and a demonstration of the skills used in tracking the plume. The procedures for mobilizing field teams and communicating from the field are also discussed. The skills exercised include the use of protective clothing, the techniques for gathering environmental samples, and use of the equipment contained in the field monitoring kit and the sampling kit. Instructions are provided on operation of the air sampler, the count-rate instrument and the various probes that can be used with it. In addition, the procedure for obtaining dosimeters, reading them, and maintaining exposure records is reviewed.

13. Protective Action Decision-Making

This program provides training on the responsibilities of key decision-makers with respect to Protective Action Recommendations (PARs). The course focuses on how to determine the most appropriate PAR, including consideration of plant conditions, time of year, meteorological conditions, and dose projections. Implementation of protective actions is also discussed. Basic Concepts Matrix, Figure 15-1 summarizes the typical concepts for each audience.

III. Participant Organization Training and Administration

HSEM will support and ensure training efforts are carried out for the municipalities and organizations within each Plume Exposure Pathway EPZ. Any organization involved in the ORO or support to the ORO may provide initial and annual retraining of personnel in their emergency response responsibilities. Training will also be open to the mutual aid organizations that support the Plume Exposure Pathway EPZ communities. Each organization having a role in the ORO shall also provide site-specific emergency response training (fire, police, transportation providers, etc.), as appropriate. The training will focus upon state/local interface, and the responsibilities of the local response organizations, roles, responsibilities, polices and procedures, It will also cover basic elements of radiological emergency response. Local training records should be transmitted to HSEM to ensure credit for such training is

recorded. Just-in-time training will also be provided as appropriate during incidents. HSEM will ensure that appropriate trainers are provided if not otherwise present.

Table 15.1 Training Matrix

Sample Training Matrix for State ERO Partners:

	Basic Emergency Planning Concepts	Notification	Protective Actions	Radiation Concepts	Radiological Exposure Control	EOC Operations	Procedure Checklists	Traffic Management	Operation of Alert & Notification System	Radiation Monitoring Equipment	Reception Center Operations	Decontamination Operations	Staging Area Operations	Accident Assessment	Radiological Monitoring & Analysis	PAR Decision Making
Governor's Office	x	x	x	x		x	x									x
Command Staff	x	x	x	x	x	x	x	x	x	x	x	x	x			x
General Staff (ESF#5 - Emergency Management)	x	x	x	x		x		x	x		x					x
ESF#1 Transportation	x	x	x		x	x	x	x					x			x
ESF#2 Comm. & Alerting	x	x				x	x		x							
ESF#6 Mass Care, Housing & Human Services	x	x		x		x	x				x	x				
ESF#7 Resource Support	x	x	x	x		x	x	x	x		x		x			
ESF#8 Health & Medical	x	x	x			x	x			x	x	x			x	x
ESF#10 Hazard. Materials	x	x	x	x	x	x	x			x		x		x	x	x
ESF#11 Agriculture & Natural & Cultural Resources	x	x	x	x	x	x	x			x		x		x	x	x
ESF#12 Energy	x	x	x	x		x	x									
ESF#13 Public Safety & Law Enforcement	x	x	x	x	x	x	x	x		x			x			x
ESF#14 Long Term Community Recovery & Mitigation	x	x	x	x		x	x				x				x	x

Chapter 16 – RESPONSIBILITY FOR PLANS AND THE INCIDENT ANNEX

I. General

The purpose of this section is to describe those unique responsibilities for the development and maintenance of this Incident Annex. For further information on development and maintenance of the State Emergency Operations Plan, in total, see SEOP, Chapter VIII.

A. Incident Annex, Local and Organizational Plans/LOA and MOUs

The Director of HSEM (Emergency Planning Coordinator) is ultimately responsible for the development, distribution and maintenance of the SEOP and its Annexes. As part of the responsibility for this Incident Annex, the Director, or his/her designee, must ensure that appropriate training, drills and exercises contained in this Incident Annex are provided. In addition, training will be provided for those individuals charged with the maintenance and upkeep of the Incident Annex. Copies of this Incident Annex will be handled through an SEOP Distribution Process. At least annually, the Incident Annex is reviewed to ensure that it reflects the current emergency preparedness activities before updated copies are issued. Individuals assigned duties for the REP planning efforts at whatever level must obtain and maintain an appropriate level of training in radiological response and planning concepts.

In the distribution to Incident Annex holders, summarization of the changes implemented since the preceding review will be included and all revisions shall be dated and marked to show where the changes have been made. Distribution will be made to FEMA (for review and approval), emergency planning coordinators for each agency/organization within the NH ORO, the Emergency Management Directors of the applicable municipalities, the power plant,, and to other persons holding copies of the State Emergency Operations Plan and its various Annexes.

Each organization (including locals) shall update its plan and agreements as needed, review and certify it to be current on an annual basis. The update shall take into account changes identified by drills and exercises. Also included will be:

- Evidence that plans/procedures and agreements have been reviewed for accuracy and completeness of information and appropriate changes made within the last year (e.g. a signature page).A process for correcting plan issues identified
- A periodic updating of the maps
- A process for periodic updating of ingestion pathway information (e.g. a list of food processing facilities, etc.)
- Bar markings or other appropriate referencing to show where changes have been made.
- A NUREG-0654/FEMA-REP-1, 44 CFR part 350.5, FEMA REP Program Manual and CPG Evaluation Crosswalk reference (all or in part) of the plan
- An update or listing of all supporting radiological plans/procedures, supporting plans and their source.
- An Appendix Listing, by title, procedures required to implement the plan. This listing shall include the section(s) of the plan to be implemented by each procedure.
- A specific Table of Contents

Local plans will be developed at and the responsibility of the local communities. Each organization/local municipality will identify (by position) the individual (Emergency Planning Coordinator) responsible for their plans and ensure they have received appropriate training. These individuals will coordinate the planning efforts and plan maintenance for their own agencies. Changes will be provided immediately to HSEM. Each organization is responsible for assuring that contact information is updated on at least a quarterly basis. Annual reviews of local plans will be done at HSEM to ensure compliance with NUREG and Annual Letter of Certification Requirements. Letters of Agreement will be updated annually between the State of New

Hampshire and the power plants. (On file). Letters of Agreement (LOAs)/Memorandums of Understanding (MOUs) are generally covered by Emergency Contracts with the State of N.H. and maintained by ESF#7 – Resource Support who activate them upon notification of an emergency situation and need for such resources. These contracts are reviewed on an annual basis by the N.H. Dept. of Administrative Services (Lead for ESF#7).

Updates of telephone numbers on a quarterly basis will be the responsibility of the Planning Coordinator, or designee at each response organization.

All plans (State and local) shall contain Tables of Contents that cross-reference applicable criteria from NUREG-0654/FEMA-REP-1 Evaluation Criteria. Each plan will also contain an appendix listing by title, the procedures required to implement the plan.

B. Annual Letter of Certification

To facilitate monitoring of Radiological Emergency Preparedness requirements as prescribed in NUREG-0654/FEMA-REP-1 and 44 CFR part 350, FEMA REP Program Manual , New Hampshire submits an *Annual Letter of Certification* (ACL) to FEMA, Region I. The ALC assists FEMA in making reasonable assurance findings and determinations regarding offsite radiological emergency plans and preparedness. The ALC submission for a given year is required by January 31 of the following year. A separate NH ALC will be submitted for Vermont Yankee and Seabrook Station. The ALCs must include assurances that all requisite activities have been undertaken or completed, as appropriate.

C. Supporting Plans and Attachments

1. Attachment A – Implementing Procedures for State Agencies
2. Attachment B – Implementing Procedures for EPZ Communities
3. Attachment C – Implementing Procedures for Host Communities

1. **Seabrook Station EPZ – Traffic Management Manual (2013)** – HSEM, 110 Smokey Bear Blvd., Concord
2. **Vermont Yankee EPZ – Traffic Management Manual (2013) –** HSEM, 110 Smokey Bear Blvd., Concord
3. **Evacuation Time Estimate Studies (VY & SS) – 2013** – HSEM, 110 Smokey Bear Blvd., Concord
4. **New Hampshire Radiological Program Laboratory Procedures Manual** – DPHS, 29 Hazen Drive, Concord
5. **DPHS, Monitoring Team Standard Operating Procedures –** DPHS, 29 Hazen Drive, Concord
6. **DPHS, Sampling Team Standard Operating Procedures –** DPHS, 29 Hazen Drive, Concord
7. **New Hampshire State Emergency Operations Plan –** HSEM, 110 Smokey Bear Blvd., Concord. Submitted to FEMA Region I
8. **New England Compact on Radiological Health Protection –** DPHS, 29 Hazen Drive, Concord
9. **Emergency Management Assistance Compact (EMAC) –** HSEM, 110 Smokey Bear Blvd., Concord
10. **International Emergency Management Assistance Compact (IEMAC) –** HSEM, 100 Smokey Bear Blvd, Concord
11. **New England State Police Assistance Compact –** DOS, 33 Hazen Drive, Concord
12. **Emergency Alert System Operations Plan –** HSEM, 110 Smokey Bear Blvd, Concord
13. **MS-1 Hospital Plans –** Cheshire Medical Center, Keene; Wentworth-Douglass Hospital, Dover; Elliot Hospital, Manchester
14. **EPZ/Host RERP Individual Community Plans –** held locally and at HSEM, 110 Smokey Bear Blvd. Submitted to FEMA Region I
15. **Vermont Yankee Radiological Emergency Plan and Procedures –** Vermont Yankee, Vernon, Vt. Copy at HSEM, 110 Smokey Bear Blvd.
16. **Seabrook Station Radiological Emergency Plan and Procedures –** Seabrook Station, Seabrook, N.H. Copy at HSEM, 110 Smokey Bear Blvd.

17. **National Response Framework –** HSEM, 110 Smokey Bear Blvd, Concord, N.H. (also available on-line)
18. **NRF – Radiological Incident Annex** – HSEM, 110 Smokey Bear Blvd, Concord (also available on-line)
19. **National Exercise Program (HSEEP) Materials** – HSEM, 110 Smokey Bear Blvd, Concord (Also available on-line)
20. **Developing and Maintaining Emergency Operations Plans (CPG 101 Ver. 2) Nov**., **2010 –** HSEM, 110 Smokey Bear Blvd., Concord (Also available on-line)
21. **National Core Capabilities List** – HSEM, 110 Smokey Bear Blvd., Concord (also available on-line)
22. **NUREG 0654/FEMA-REP 1, Rev. 1 –** HSEM, 110 Smokey Bear Blvd., Concord
23. **Radiological Emergency Preparedness** – Program Manual (P-942), (also available on-line)
24. **Special Facilities Emergency Plans** – maintained at facilities
25. **FEMA-REP-21, Contamination Monitoring Standard for a Portal Monitor Used for Radiological Emergency Response**, March 1995.
26. **Portal Monitoring Procedures & Manual –** RIMC Shop, HSEM, 107 Pleasant St. Concord
27. **FEMA-REP-22, Contamination Monitoring Guidance for Portable Instruments Used for Radiological Emergency Response to Nuclear Power Plant Accidents,** October 2002.
28. **EPA-400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents,** May 1992./Draft EPA Guidelines, 2013

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Chapter 17 - GLOSSARY

Access Control	The prevention of unauthorized people from entering a specific area. Road barriers and traffic control will be used to affect access control. The controlled area may include all or part of the Plume Exposure Pathway (10-mile) Emergency Planning Zone (EPZ) or may be adjusted in order to bound a restricted zone established by the New Hampshire Division of Public Health Services (DPHS) to control and monitor areas which may have become contaminated with radioactivity.
Access Control Point (ACP)	A key intersection or area of road designed to restrict traffic into and within the Plume Exposure Pathway EPZ as part of the access control.
Activation	Refers to a process by which a facility is brought up to emergency mode from a normal mode of operation. Activation is completed when the facility is ready to carry out full emergency operations.
Agricultural Facility	Any building or tract of land used to grow crops or raise livestock for production of food, including food storage and food processing operations.
ALARA	As low as reasonably achievable. A philosophy followed to achieve making every reasonable effort to maintain exposures to ionizing radiation as far below the dose limits as practica. A practice to ensure consistency with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations. These means are in relation to the utilization of nuclear energy and licensed materials in the public interest.
Best Practice	An exemplary, peer-validated technique, procedure, good idea, or solution that works and is solidly grounded in actual operations, training and exercise experience.
Buffer Zone	An expanded portion of the restricted zone selected for temporary radiation protection controls until the stability of radioactivity levels in the area is confirmed.
Committed Dose Equivalent (CDE)	The radiation dose equivalent due to radionuclides in the body over a 50-year period following their ingestion or inhalation.
Code Red	Emergency Telephone Notification System.
Committed Effective Dose Equivalent (CEDE)	The committed dose to the body represented by the sum of products w * CDE, where w = a weighting factor for each of the organs and tissues considered.
Congregate Care	Refers to the provision of temporary housing and basic necessities for evacuees.
Demonstrated Strength	An observed action, behavior, procedure and/or practice that is worthy of special notice and recognition.
Derived Intervention Level (DIL)	The level of radioactivity in food stuffs that would call for implementation of protective actions.

Derived Response Level (DRL)	The level of radioactivity in an environmental medium that would be expected to produce a dose equal to its corresponding Protective Action Guide (PAG).
Dose Equivalent	The product of absorbed dose and a quality factor related to the biological effectiveness of the radiation involved.
Drill	A drill is a supervised instruction period designed to test, develop and maintain skills in a particular operation, as well as to provide a means to correct deficiencies identified as a result of other drills or exercises.
Emergency Alert System (EAS)	A network of commercial broadcast radio stations which provides a direct link between responsible public officials and the public. The Emergency Alert System (EAS) provides for prompt notification of an emergency situation to the public. The EAS also directs the public to the broadcast outlets from which detailed emergency public information will be provided. (EAS stations will broadcast instructions about which broadcast outlets will carry emergency public information detailing actions the public should take in the event of an emergency.)
Emergency Classification Level (ECL)	The level at which an incident at a nuclear power plant has been classified by the plant operator. Each level triggers a set of predetermined actions by the affected emergency response organization.
Emergency Operations Center (EOC)	Locations designated by the state and local emergency response organizations as assembly areas for their respective staffs. These facilities are the central command and control points for their respective emergency response organizations.
Emergency Operations Facility (EOF)	A center established to coordinate the flow of technical information from the onsite to the offsite emergency response organization. It is in the EOF that accident assessment activities are coordinated among state, local, federal and plant personnel.
Emergency Planning Zones (EPZ)	The area covered by the Radiological Emergency Response Plan. The boundary for the Ingestion Exposure Pathway EPZ is a 50-mile radius from the plant. The boundary of the Plume Exposure Pathway EPZ is chosen to accommodate practical planning considerations and to conform as closely as possible to a 10-mile radius. The actual EPZ boundary may be more or less than 10 miles from the plant.
Emergency Public Information (EPI)	Emergency Public Information is detailed official information broadcast to the public after they have been notified of an emergency situation via the Emergency Alert System (EAS). The EAS will advise the public which broadcast outlets to access to review detailed instructions on "How to Implement Recommended Protective Actions."
Emergency Response Organization (offsite) (ERO)	The combination of state, local, federal, and private agencies designed specifically to provide offsite capability to implement emergency responses.
Emergency Response Planning Areas (ERPA)	Specifically defined regions within the Plume Exposure Pathway Emergency Planning Zone of Seabrook Station. There are seven specifically defined regions within the Plume Exposure Pathway. Each ERPA is an aggregation of two or more adjoining communities in whole or part, chosen from their logistical characteristics to meet evacuation planning guidelines.

Emergency Worker	An individual who has an essential mission within or outside the Plume Exposure Pathway EPZ and is issued dosimetry per the NHRERP.
Emergency Worker Exposure Control Plan	Demonstrates that OROs have the capability to assess and control the radiation exposure received by emergency workers.
Evacuation	The urgent removal of people to avoid or reduce high-level, short-term exposure.
Exclusion Area	The area established to control access to an evacuated area. An Exclusion Area is established after an area has been evacuated. The purpose is to control the spread of contamination and provide security.
Exercise	An exercise is a controlled event that tests the integrated capability and a major portion of the basic elements existing within emergency plans and organizations.
Federal Radiological Monitoring and Assessment Center (FRMAC)	This facility is a center from which the DOE Offsite Technical Director coordinates federal radiological monitoring and assessment efforts.
Governor's Authorized Representative	The Governor's Authorized Representative is the person given the authority to act on behalf of the governor in matters related to the RERP.
Hostile Action Based (HAB)	A hostile action is "an act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attacks by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. An incident that includes this is termed a hostile action based event."
Incident Field Office (IFO)	An IFO is a forward command post from which the New Hampshire Homeland Security and Emergency Management (HSEM) may coordinate with the plant, and with federal, state, and local emergency response organizations. The IFO may be used to supplement the emergency response capability of the State EOC in Concord.
Initial Notification	The first communication from the Plant Control Room to the offsite emergency response organization that an incident has occurred at the power plant, which may involve activation of the RERP.
Ingestion Exposure Pathway (IEP)	The pathway through which persons may consume radioactive material and receive radiation exposure from internally deposited radioactive materials (i.e., from ingestion of contaminated water, food, or milk).
Ingestion Exposure Pathway EPZ	The Ingestion Exposure Pathway EPZ is an area with a radius of 50 miles around the plant site.
Joint Information Center (JIC)	The location where news media representatives obtain news information concerning an emergency at a nuclear power plant. The public information representatives at the Joint Information Center will gather, coordinate, and release information as it becomes available.
Lesson Learned	Knowledge and experience, positive or negative, derived from actual incidents, as well as those derived from observations and historical study of operations, training, and exercises.

Level I Finding	An observed or identified inadequacy of organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant (NPP).
Level II (2) Finding	An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.
Local Dispatch Center	The facility from where initial notification to the local communities is performed and sirens can be activated. This is Rockingham County Dispatch Center (RCDC) for Seabrook Station and Southwestern New Hampshire District Fire Mutual Aid (SWNHDFMA) for Vermont Yankee.
Local Liaison Facility (LLF)	The facility where HSEM Local Liaisons communicate directly with municipal EOCs, facilitating the exchange of information between the state and municipal EOCs.
Mass Care Shelter	The location at which evacuees are fed and housed after transport from a reception center.
Outdoor Recreation Area	A public or private land or body of water used by the public for recreational purposes including, but not limited to, camping, hiking, swimming, boating, hunting, and fishing. These areas may be under state, federal, municipal, or private ownership.
Plan Issue	An observed or identified inadequacy in the offsite response organizations' emergency plan/implementing procedures, rather than that of the ORO's performance.
Plume	An airborne mass of material that is dispersed through the atmosphere. In the case of a nuclear power plant, the material could consist of radioactive particles and gases.
Plume Exposure Pathway	The pathway through which persons may be exposed to (1) external exposure from airborne and deposited material, and (2) the committed dose to internal organs from inhalation of radioactive materials such as radioactive iodine, xenon or krypton from the passing radioactive plume.
Plume Exposure Pathway EPZ (PEPEPZ)	The Plume Exposure Pathway EPZ is an area within a 10-mile radius around the plant site.
Precautionary Action	Measures that may be implemented with the intent to facilitate and expedite later protective actions should they become necessary.
Primary Agency	One of three state agencies that possesses the decision-making authority to implement the emergency response actions. The primary agencies in this RERP are the Governor's Office, the New Hampshire Homeland Security and Emergency Management (HSEM), and the Division of Public Health Services (DPHS).
Protective Action	Emergency measures to be taken by the public to mitigate the consequences of an accident by minimizing the radiological exposures that would likely occur if

	such actions were not undertaken. Examples are access control, sheltering, and evacuation.
Protective Action Guides (PAGs)	The numerically projected radiation dose level criteria, which act as trigger points for initiating protective response actions.
Public Alert and Notification System (PANS)	A system comprised of sirens, Emergency Alert System, and other methods used to disseminate public emergency information.
Public Notification System/ NOAA (PNS/NOAA)	Vermont Yankee public notification system using NOAA tone alert radios.
Public Water Supplies	Those publicly or privately owned drinking water supplies that are regulated by the Department of Environmental Services.
Radionuclide	Refers to a radioactive isotope of a particular element.
Reception Center	The location at which the host community with support from the State provides services for any evacuated population in need of public assistance. Monitoring/decontamination, registration, food, and shelter can be arranged by the reception center personnel.
Recovery	The phase after plant conditions have stabilized and efforts are taken to return to pre-accident conditions.
Re-entry	Workers or members of the public going into a restricted zone on a temporary basis under controlled conditions.
Relocation	The removal or continued exclusion of people from contaminated areas to avoid chronic radiation exposure.
Restricted Zone	The area established to control access to an evacuated area. A Restricted Zone is established after an area has been evacuated. The purpose is to control the spread of contamination and provide security.
Return	The reoccupation of areas cleared for unrestricted residence or use.
Site	The property owned by the facility in the immediate area of Seabrook Station and/or Vermont Yankee.
Support Agencies	State and private agencies which provide personnel, equipment, facilities or special knowledge to support the implementation of the emergency response.
Total Effective Dose Equivalent (TEDE)	The sum of external exposure from airborne and deposited materials and the committed dose to internal organs from inhalation of radioactive materials from the passing plume.
Traffic Control	Refers to all activities accomplished for the purpose of facilitating the evacuation of the general public in vehicles along specific routes.
Traffic Control Point (TCP)	Key route intersections within and around the Plume Exposure Pathway EPZ designed to facilitate the flow of traffic in a desired direction while discouraging the flow of traffic in other directions. Traffic Control Points may sometimes double as Access Control Points to restrict entry in the EPZ.